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8% " " " " " riboflavin allowance
10% " " " " " niacin allowance

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(3) Stir with fork into 3 ounces of soup (preferably thick soups such as bean, pea, oxtail, beef, etc.).

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The Contemporary Food Situation Inside Holland

L. A. H. PETERS

This and the five papers following were presented at a Liaison on Session January 23, 1943, under the auspices of the Committee on Food Habits, National Research Council, Washington, of which Dr. Margaret Mead is Executive Secretary. The general subject of the Conference, in which representatives of various agencies interested in food relief participated, was "Feeding Liberated Countries and the Nutrition Program."

Mr. Peters is Agricultural Attaché of the Netherlands Embassy and a member of the Netherlands Economic, Financial and Shipping Mission to the United States. He came to Washington in 1937. He last visited the Netherlands in the fall of 1939 during the first month of the war.

AS YOU will recall, the Nazis invaded the Low Countries in the early hours of the tenth of May 1940. The war between Great Britain and Germany had started eight months before, during which time continental Europe was submitted to a more or less rigorous blockade through which foodstuffs and other commodities from overseas were sparingly admitted to the neutral countries of Western and Northern Europe.

Having a vivid memory of the gradual worsening of import possibilities during the first World War, when the Netherlands was not attacked and could remain neutral, the Government in 1938 had already started the building up of stockpiles of imported foodstuffs and feedstuffs as a safeguard against a threatening recurrence of a European war. At the same time, the consumer rationing of commodities was organized, thereby making full use of the experiences gained during 1914–18. The outbreak of the war in 1939 found the Netherlands economically prepared for a siege. It was believed that accumulated supplies and an efficient system of rationing would go a long way to protect the welfare of the Netherlands people under the stress of partial or total blockade.

The invasion of May 1940 and the speedy occupation of Holland by the overwhelmingly superior enemy forces changed the picture entirely. Occupied Holland was supposed to come down first to the subsistence level of the restricted consumption of the German people and then to be exploited and starved in favor of the Nazi war machine.

Let us compare the present food situation in the Netherlands with the normal or prewar conditions. First I may state that the information on conditions in the occupied territory reaches us in various ways. There are the Nazi-controlled newspapers in Holland which contain definite information about rations and circumstantial evidence about food and health conditions in general; there is also the Nazi-controlled radio in Holland, broadcasting exact information about rations, production control, live stock requisitions, guaranteed prices, etc. This sort of information has to be correct, since it serves as a guide for the consumers and producers in occupied Holland. Then, of course, we receive information from persons who have escaped from Holland, and such information is very often of a personal and local nature and must be carefully checked with similar evidence.

One way of indicating in a single figure the status of nutrition is by determining the number of calories consumed per person per day.

In the Netherlands, the energy value of food consumption, per capita and per day in 1938, amounted to 2639 calories. The League of Nations' standard, as you know, is 2900 calories; in September 1942 the energy value of the legal food ration per normal consumer per day was 1570 calories and according to later information in November 1942 the energy value had come down to 1500 calories. But this decrease of the energy value does not give a complete picture of the deterioration of the food situation. The shortages are greatest in the protective foods. In September 1942 the amount of fat in the legal ration was 76 per cent lower than the League of Nations' standard, and the quantity of protein was 43 per cent below this standard. The protein deficiency was most marked with regard to animal protein and amounted to 80 per cent. Compared with the just-mentioned standards, the ration showed a 76 per cent calcium deficiency.

Alarming are the vitamin shortages. In January 1942 the rations showed the following deficiencies as compared with prewar consumption (which does not greatly deviate from the standards given by Barbara Callow in *Food and Health*): vitamin A, 48 per cent; vitamin D, 48 per cent; vitamin B_1, 37 per cent; and vitamin C, 13 per cent.

Some examples may be given to illustrate the more or less abstract measurements of nutritional deficiencies. Consider the fat foods. In 1938 average consumption of butter, margarine, edible fats and oils, exclusive of lard, was practically 300 gm. pure fat (about 10.5 oz.) per person per week; since the middle of July 1942 the total fat ration has consisted of 150 gm. butter (slightly more than 5 oz.), equal to 127.5 gm. (4.5 oz.) pure fat. There has been no margarine or edible vegetable oil available.

In 1938 the average consumption of meat (pork, beef, veal, inclusive of lard and other animal fats) amounted to 732 gm. (about 1 lb. 10 oz.) per person per week; according to the latest information the meat ration was reduced early in December 1942 to 250 gm. (less than 9 oz.) per week, including the bone which we estimate at about 30 per cent.

Average consumption of milk before the war was about 3 liters per week. Soon after the occupation all milk was standardized at a butterfat content of 2.5 per cent. The most recent information indicates that the ration now is one-half pint skim milk per person per week.

The Netherlands is known as a cheese-producing country; before the war average consumption of cheese per person per week amounted to 148 gm. (more than 5 oz.) containing about 22 per cent fat; the weekly ration of cheese since the beginning of August 1942 has been brought down to 75 gm. (about 2.7 oz.) containing about 10 per cent fat.

Nutritional deficiencies verging on actual starvation are showing up in figures concerning the condition of public health in the occupied Netherlands.

The rate of mortality increased 9 per cent in 1940 as compared with 1939, and 17 per cent in 1941 as compared with 1939. The greatest increase took place in the adolescent group (from 14 years to the adult age), where mortality in 1941 increased 43 per cent as compared with 1939. Victims of actual warfare are not included in these figures. Ominous are the statistics concerning causes of death. The following figures indicate the percentage increase of deaths in 1941 as compared with 1939:

Influenza	124%
Tuberculosis	47%
Bronchitis	36%
Pneumonia	20%
Contagious diseases (exclusive of Tuberculosis and Influenza)	98%
Diarrhea and Enteritis	54%

The enormous spread of certain contagious diseases must be ascribed partly to nutritional deficiencies and partly to lack of medical supplies. During the first four months of 1942 the number of diphtheria cases increased more than tenfold as compared with the same period in 1939, the number of dysentery cases six and one-half times, the number of cases of poliomyelitis more than three times.

An examination of school children in Rotterdam by the Public Health Service in the summer of 1942 has shown that only 36 per cent received sufficient vitamins in their daily diets to prevent rickets.

The above evidence makes it clear that extensive relief measures are necessary as soon as the blockade can be lifted. Already in the spring of 1941 the Netherlands Government, which temporarily is residing in London, made provisions for the acquisition of the most necessary foods and other necessities to supply the starved population during the first four months after liberation of the country. Requirements were estimated on the basis of prewar consumption and possible food resources in the liberated territory; purchases have been made to build a stockpile in accordance with these requirements, but it has not been possible up to now to acquire all the necessary stocks. The most critical foods are fats and proteins and certain products rich in vitamins. The domestic fat supply depends entirely on the condition of the milk stock. All indications point to a reduction of the number of cattle to one-half the prewar level and lack of feedstuffs points to a considerable reduction of the milk production per cow. Whereas before the war—and, of course, forcibly also during the occupation—the Netherlands exported a large percentage of its milk production, the reduced number of cattle cannot produce enough milk to supply normal domestic consumption of milk, butter and cheese, even if the necessary feedstuffs could be immediately imported.

Before the war the Netherlands exported large quantities of pork and eggs, but in the course of the war pork production has been reduced to 22 per cent of the prewar level and the poultry stock has been reduced to less than 10 per cent of that in prewar times. During the first few months after liberation of the country, it will be necessary to import large quantities of meat and eggs or substitutes thereof. Then, in order to rehabilitate domestic production as soon as possible, it will be advisable to import feedstuffs and possibly also eggs for hatching.

If it were not for the forced exports of fruits and vegetables to Germany, the Netherlands would have a sufficient source of vitamins and minerals. Whether this supply will be available to the Netherlands people after the country has been liberated from the Nazis, depends a great deal on the season during which this liberation takes place. It will therefore be necessary to provide certain supplies of products rich in vitamins and minerals, such as cod liver oil, concentrated citrus juices, dried fruits.

The longer the war lasts the more critical the food conditions will grow, and the more difficult it will be to rehabilitate home production.

The Current Food Situation Inside Poland

MARIA BABICKA

All data in the paper below are based on information received by the Polish Government through underground channels or contained in German official or unofficial statements published by the German or the German-controlled press. Information from Polish sources has been carefully checked and its origin verified; information from German sources has been checked as to origin only, and there is no means at present of distinguishing facts from propaganda. For obvious reasons, therefore, no questions can be answered fully. Information from Poland is difficult to obtain, irregular in arrival and fragmentary in character, but the research staff of the Polish Information Center believes that the margin of error is smaller than might be expected under the circumstances.

Maria Babicka was attached to the Polish Legation in Copenhagen from 1928–40 when she was transferred to the Polish Embassy in London and assigned to the Polish Prime Minister's office. Since November 1942, she has been Officer for Special Research in the Polish Information Center, New York. She was last in Poland in July 1939.

FOR the first time in history, food control is being used by the Germans not to ensure equitable distribution of available supplies, but as a weapon of slow and certain starvation in the plan to exterminate the educated and professional classes of the Polish people and to reduce the masses to slavery. Poland is an agricultural country and before the war exported large amounts of foodstuffs. Since the German occupation, most of the food produced has been sent to Germany, and the best part of what remained has been taken to feed the German army of occupation and the German officials. That which is left for the Polish inhabitants is the smallest amount on which life can be maintained and social collapse averted.

Three things to be borne in mind are the depletion of live stock, the shortage of natural manure on which Polish agriculture mainly relied and the fact that except for two or three limited areas, the soil of Poland is poor and must have fertilizers. It is not known whether the two large nitrate plants in Poland have been kept in operation by the invaders or transferred to Germany. Even if these are still in operation there is bound to be a marked deficiency of phosphates previously imported from Algiers. For their own purposes of plunder, the Germans seem to have increased Polish agricultural production and when they are driven out of Poland, although there will be no stocks of food for immediate distribution, the food production potentialities will be good.

The Germans have increased the production of fats and protein-rich foods. For instance, the western provinces, illegally "incorporated" in the Reich, produced more than a billion quarts of milk in 1941, none of which was given to the Poles. The export of pigs to Germany exceeded 700,000 and the invaders hope to get a million pigs from Poland this year. The western provinces of Poland alone—what Germany calls the granary of the Reich—provided Germany with 480,000 tons of wheat, 150,000 tons of rye, 150,000 tons of barley and 80,000 tons of oats. The Germans hope this year to get from Poland one million tons of assorted grains, one million tons of potatoes and 12,000 tons of butter. What food supplies are actually available will depend on the time of year the Germans are expelled, and such supplies must be kept for the local needs of the agricultural population. Once the Germans are driven out, food relief in Poland, as far as rural districts are concerned, will be of a temporary character; that for the city and industrial population will probably have to be continued for a year after the next harvest.

After more than three years of war, Poland finds herself divided into three distinct parts each of which is treated differently by the invading power, and in each of which food control and rations vary.

In one of these, the western provinces of Poland and a small part of Central Poland, together with Danzig, have been illegally "incorporated" in the Reich, and are considered by the invaders as part of Germany. The Poles have been ruthlessly deported from these Polish territories and at first the German

policy was one of colonization by German settlers, but Gauleiter Greiser declared in January last year that food production now holds priority and that anything that might impair it should be rejected unconditionally.

In a second area, termed the Government General and originally intended as a home for the Poles where they might live and work as slaves to the Germans, the entire economic and food policy was to be directed exclusively in the interest of Germany and the German people. Recent decrees show that the present policy is to make the Government General self-supporting in the matter of food production, and to send all other available manpower to forced labor in Germany.

The third area comprises the territories east of the Bug river, originally occupied by Russia under the German-Soviet agreement of 1939 and now overrun by the Germans and forming with the Baltic States part of the so-called Ostland.

Taking these divisions of Poland in inverse order food conditions would seem to be as follows:

Very little is known of conditions in the Ostland, except that virtually all the able-bodied Poles have been deported to Russia or to Germany. The Russian withdrawal was accompanied by the application of the scorched earth policy. The Poles still living in the eastern provinces are believed to be in dire straits, with the Jewish population of large cities like Wilno and Lwow facing extermination and the peasants of the rural districts being either reduced to slavery or driven from their homes. No reliable information exists as to what food is available there or how it is rationed.

In the Government General everything is sacrificed to the war interests of the Reich. Its whole economy is directed to obtain in the shortest possible time the maximum food and economic resources for the immediate strengthening of the German war effort. From the little food left for Poles, those occupied in war industries are served first, while, and I quote, "in periods of scarcity the rest of the population must be reduced to a minimum of food."

In the Government General official rations are so small that people cannot live on them. The average weekly rations for the adult population are now less than they were in 1941, but here are the figures for December of that year. Each adult received about 3.25 lb. bread a week, 3.5 oz. flour, about the same of meat and of fats, from 3 to 4 oz. sugar, 1.5 oz. coffee substitute, a few pounds of potatoes from time to time, and two eggs a month. Polish children received from 1.75 to 2.25 lb. bread a week and from 1.5 to 2 oz. biscuits. No information is available as to milk rations nor the distribution of infant foods. Detailed tables of rations in Warsaw and Cracow have been prepared.

These rations are totally insufficient as they amount to only 700 to 800 calories a day instead of the minimum 2400 fixed by the League of Nations. But the Poles are subjected to the heaviest labor and according to the same standards ought to have from 3000 to 4800 calories a day.

As a result more than 20,000,000 Poles in the Government General are deliberately being reduced below the subsistence level. The occupation authorities pursue this course in full accord with the Reich officials who make no secret of their intention to starve the Polish people. Today horseflesh is a black market luxury for Poles in the Government General and the people are reduced to eating dogs, cats and rats, and to making broth from the skins of dead animals and the bark of trees.

As even before the war that part of Poland which is now the Government General was not self-supporting and as 2,000,000 Poles have been sent there from the illegally "incorporated" provinces, the Polish population is being slowly starved to death. Rations given in the Government General to the Poles are only half of that received by the Germans. But even so the Poles cannot get their rations since all the food available is first distributed to shops "for Germans only" while the special shops where Poles buy are supplied only afterward and "as far as the need has been officially confirmed."

In the illegally "incorporated" areas the food supplies to Poles and Germans are based in principle on official ration allocation, and maximum prices are enforced as they are in Germany. All available foods are sold at fixed prices except a very few unrationed goods. Shops receive official allocations of food in quantities that should enable each person to acquire the ration to which he is entitled, but Poles are not allowed to shop in the same stores as the Germans and those reserved to Poles are supplied only after the wants of stores reserved for Germans have been filled. The German rations are roughly twice that allowed the Poles who may buy only articles of utter necessity.

In the illegally "incorporated" territory the bread ration for adult Poles is five pounds a week, but they receive practically no flour. They are allowed about six ounces of meat if available. No reliable data are available with regard to the amount of fats or margarine but the Polish ration is believed to be half of that for the Germans which is half a pound a week. The Germans get one pound of sugar a week; the Poles, half that amount. Small quantities of oatflakes, groats, *ersatz* jam or honey are also occasionally released for the Poles. If anything, the Poles who have been allowed to remain in the illegally "incorporated" territory fare better than those in the Government General except perhaps in one important respect: The human physiological economy uses up certain quantities of fats essential to its performance. If for generations fats are supplied in deficient quantities, that economy changes and the husbandry is altered. Fats are used more efficiently

and the carbohydrates are utilized differentially. On the other hand, a sufficiency of fats results in a more lax metabolism. Applied to Polish conditions this shows that a different rate of organic underfeeding will exist in the East and in the West of the country. Western Poles, owing to the higher fat content of their habitual diet, when starved as they are being starved under the German occupation, will deteriorate sooner than the eastern Poles whose diet has always been less plentiful in fats.

The coefficient for the comparison of the two may be taken as one to five, and this may account to some extent for the slower process of deterioration under adverse conditions of undernourishment which can be observed in central and eastern Poland as compared to southern and western Poland. (It is interesting to note that the same observation applied to the German picture where the noted absence of fats is creating biological deterioration not observed to such an extent in eastern Poland.) One very important corollary to this is the lower rate of deterioration of the health of children in eastern Poland than in western Poland, to which not enough attention has been paid.

Poles in the illegally "incorporated" areas and in the Government General can obtain ration cards when between the ages of 14 to 60 only on presentation of their labor registration cards which show that they are in permanent employment or have applied for work at least once a month at a labor bureau. Failure to produce such proofs not only makes it impossible to obtain a ration card but entails repressive measures against all the members of the family living in the same house.

The food situation of the Poles both in the "incorporated" area and in the Government General is further restricted by a number of regulations forbidding the sale to Poles of articles available to the Germans. For instance, here is a list of 41 items of food the sale of which to Poles is considered as "economic sabotage" punishable by death if the transgressor is a Pole, by fine and imprisonment if the guilty party is a German: wheat bread, wheaten flour, rolls and luxury pastry, cakes, veal, pork, ham, poultry, game, fish, lard, macaroni, rice, natural honey, sardines and mackerel, herring salad, anchovies, jellied mussels, crabs, luxury vegetables, dried vegetables, onions, local and southern fruits, berries, currants, fruit juices, cherry syrup, condensed milk, cocoa, mushrooms, nuts, soup cubes, chocolate and chocolate products, sweets, pudding powders.

Under such conditions the existence of a black market was a foregone conclusion. It exists everywhere in Poland and has grown to astonishing proportions, all the more so since it is supplied largely by the Germans themselves out of food stolen from exports to Germany or from army stores. All Poles who can afford it buy to meet their most urgent needs from the black market, at the risk of their lives or of long terms in concentration camps. Here are some prices on the Warsaw black market: one pound of black bread, $1.50; one pound of white bread, $2.00; one pound of meat, $6.50; 1 pound of bacon, $8.50; one egg, 50 cents; one pound of butter, $9.00; milk, $1.25 a pint; one pound of potatoes, 50 cents.

It must not be forgotten that whereas prices on the black market are multiplied many times over those of the prewar period, wages are less, for the Germans have instituted special wage scales for all kinds of employment to keep wages as low as possible. All wage agreements state the maximum wage workers are entitled to, not the minimum as heretofore.

A word must also be said about the Jewish section of the population. The Jews are subject to worse food conditions than the Poles. As regards food supplies the Jews come under a completely separate system, aimed at depriving them of the most elementary necessities of life.

In the ghettos the Jews are completely cut off from the outside world. They are under the supervision of special German commissaries who have unrestricted powers. The ghetto receives rationed goods —bread, meat, sugar, fats, etc.—really not rationed in the strict sense of the word but on sale to Jews with the permission of the German authorities. No article of food not included in either of these categories can be sold to Jews, either outside or inside the ghettos.

The quantity allowed in the ration is continually changed, the tendency being to reduce the allotted quantities. The weekly rations per person of the most important articles of food in the Warsaw ghetto during a certain unspecified period of 1941 were as follows: bread, 14 to 15 oz.; meat, 3 to 4 oz.; sugar, 1.5 oz.; fats, .09 oz.

Conditions were somewhat better in Cracow, where in March 1941 the weekly rations for Jews were: 2 to 2.5 lb. bread; about 2 oz. sugar and 1 oz. fat, but no meat at all.

In such conditions the starving Jewish population has to purchase food on the ghetto black market, supplied by smuggling over the walls at the risk of life, and by the extensive bribery of the German guards. Thus, while the rations for Jews are only a half or a third of the rations for Poles, the prices on the black market are twice as high. A Jewish worker employed on forced labor, and receiving four zlotys (about 80 cents) a day, could buy for that amount only a pound of potatoes, while a Jewish tailor earning 50 zlotys a week could buy only a little more than a pound of fats for his whole week's wages.

Obviously, no accurate mortality statistics are available, as even those published by the Germans are known to be falsified for internal propaganda purposes. However, during the first six months of 1939, just before the war, mortality in Warsaw was

at the rate of 11.4 per thousand per annum while in 1941 the rate had risen to 29.8 per thousand. In 1938 there were 2850 deaths from tuberculosis in Warsaw out of 1,280,000 inhabitants; in 1940 this had risen to 6543; in the first 8 months of 1941 to 5893, representing an annual number of deaths from this cause of 8840. The birth rate decreased from 24.6 per thousand to 9.84 per thousand and infant mortality is so high that it is believed that one child in three dies before it is a year old.

Foods in War and Famine

An important reason for the great amount of emphasis that nutritionists have placed on green and yellow vegetables is the content of beta-carotene in spinach, carrots, beet greens and other colored plants and roots. There is widespread misconception to the effect that chlorophyll has a place in animal nutrition. There is no evidence to support such a view. Carotene alone and not the chlorophyll of plants is converted in the animal organism to vitamin A. Few foods provide vitamin A ready made. Butter and fish liver oils are about the only sources. Butter may be excellent as a source or only fair, depending on the feed supplied the cow. Interference with the fisheries of the world by the war has again directed attention to sources of carotene. Plant oils contain no preformed vitamin A and but little carotene. However, the pulp of certain yellow vegetables is very rich in carotene. It is suggested that 10,000 acres planted in carrots would yield 20 trillion units annually of vitamin A. This would amount to 4 billion daily human requirements, or enough to last a population of 100 million persons 40 days. Another good source of carotene is the sweet potato, a prolific grower. Many vegetables little known in North America deserve attention by the food economist. Some could be developed with advantage. The taro, for example, has a subterranean stem resembling the potato. The yield per acre is two to four times that of the potato and, measured in calories, may be ten times that of rice. Use of grass for human food again has come up for consideration since the present war began. Nebuchadnezzar was compelled to "eat grass as oxen" to atone for many sins. However, the benefit he derived, if any, was largely spiritual. The value of a food, as emphasized by Graham Lusk before World War I, depends mainly on the ratio of nutritive to non-nutritive components.

In times of famine, however, people will resort to whatever they can find to eat. In Russia, for example, in the last war not only grass but also the leaves and the bark of trees were eaten. In Germany and Russia enormous amounts of watery root vegetables, such as turnips, were consumed. In a population leaning too heavily on such foods, war edema is likely to develop. The type of protein obtained is poor and excessive water is ingested. Also the bulk of watery foods which need to be ingested to contribute significantly to caloric requirements places an intolerable strain on the human intestine. The coarseness and amount of fiber some such foods contain may even interfere with absorption of what nutrients are present. The Germans as well as the Russians in the last war attempted to eke out dwindling supplies of flour by adding to this flour bran and chaff and even straw. By doing so they made bad matters worse. Nutrients diluted with large amounts of indigestible material are lost; they cannot be absorbed effectively. Thus grass serves poorly as a human food. Even tender, leafy vegetables, valuable as a source of minerals and carotene, would not alone provide for human nourishment. Their protein would be inadequate and their water content excessive. However, all the leafy vegetables have a place as supplements to other foods, and tender young grass when dehydrated is excellent as a vehicle for several vitamins and salts.

The value of oats as feed for stock has long been known to farmers. Samuel Johnson's caustic commentary in his Dictionary that "oats in England is generally given to horses and in Scotland supports the people" illustrates how prejudice works hardships in nutrition. In England, then as now, just as in America, men were more concerned about good nutrition for their live stock than for themselves. The answer said to have been given to Samuel Johnson was "and where will you see such horses and such men." The Scots became a hardy race on oats. So did the early Norse. Oatmeal is often mentioned in the Sagas. An example of how misguided man can be was supplied by Hou, who wrote that in the rice country of China where beriberi is endemic the quite nutritious soy bean is used for field fertilization in the cultivation of the less nutritious rice. One can buy brown rice in American markets, but only at a premium. It spoils and hence its distribution costs are high. A better buy is unpolished rice. Unpolished rice is said to retain about a half of the thiamin of brown rice.—*Wilder, R. M. and Keys, T. E.: J. A. M. A. 120: 529, 1942.*

The Relevance of Food at the Time of Occupation: Conditions in North Africa

MILTON S. EISENHOWER

With the attention of America concentrating at the moment on the North African front, the views of Milton S. Eisenhower, Associate Director, Office of War Information, who, incidentally is a brother of the Commanding General of the Allied Forces in North Africa, are of particular interest. Mr. Eisenhower's previous experience as Assistant to the Secretary, and later Director of the Office of Information, and Land Use Coordinator, U. S. Department of Agriculture, and more recently Director of the War Relocation Authority, adds weight to his succinct comments on the current situation.

IN NORTH AFRICA, several weeks ago today, I saw healthy, vigorous American young men, with the food of American farms warm in their stomachs, marching to the front to join in the battle of Tunisia. There was not any whipped cream, or fluffy white bread, or tenderloin steak in their rations. But there was good, nutritious food. Good, wholesome food. Those well-fed American troops made it very easy to understand that food is one of the essential weapons of war.

Behind them I saw a country stripped bare by the Axis. The Nazis had taken not only all they could from continental France; directly or indirectly they had also taken from North Africa everything they could get their hands on—food and clothing, pharmaceuticals, even pipe, cement, and anything else that was movable.

Food, clothing and other commodities were so scarce that money was practically worthless. Many of the stores were closed. You could not buy a basket of tangerines from a farmer because he could not use the money to buy the things he needed. But with a bolt of cloth you could buy anything he had. The farmer could use even a little cloth to provide some protection for his nearly naked children. People would no longer work for money which they could not use. But men and women would work all hours for a little wheat, or meat, or sugar, or salt.

In short, the Germans had bled the country until the whole economy had gone to pieces.

There are thousands of people in North Africa today who fled from Europe in 1940, in 1941 and in 1942. These refugees preferred the privations, the hunger, even the nakedness of North Africa to Nazi oppression on the continent.

But more than hunger threatened. With a short crop last year in North Africa, with tremendous supplies taken out, and with an abnormally large population in the area, many behind the lines actually might have starved had ships of the United Nations not brought food from America. Some food and clothing have already arrived. More is on the way. Still more will be. You can see hope once again in the eyes of men, women and children. And thus in a second, vital way, I saw the products of American farms as an essential weapon of war.

The power and democratic spirit of this country are moving against the Axis. Make no mistake about it—the hungry people of occupied Europe will know, despite all the lies of the Axis radio, that our practice is just the opposite of that of our enemies. The Axis will steal the food of helpless people. We will do the opposite, and to the best of our ability.

The food we send now will tide the civilian population over until the new crop is produced in North Africa. The next thing for us to do, therefore, is to make it possible for the people themselves to produce the maximum amount of food. Normally, large quantities of vegetables are grown on well-developed lands along the Mediterranean. Wheat is a major crop. Citrus fruits, sheep, and grapes are plentiful. Maximum production in North Africa will of course reduce the drain on our own shipping. To guarantee maximum production we must send certain types of fertilizers, machinery repair parts and fuel which can be used to operate farm equipment. The bulk

production of cereals in North Africa is rather highly mechanized and the machinery will not run without fuel.

As time goes on, I hope to see an expansion in the agricultural production of North Africa. Opening new lands, however, is not normally a short-time task. Drainage, irrigation, and soil improvement are involved. By all means, I think plans should be laid now to aid the people of North Africa to expand production as quickly as possible but I am sure best results will be obtained this year by helping to maximize production on existing developed lands.

My impression is that the Nazis did not dismantle and remove processing equipment. Consequently, the machinery is available for processing, but again, repair parts will be needed.

In short, the general economic situation, including that of agricultural production, is now at the lowest ebb. This means that the heaviest drain on our shipping resources occurs right now. Unless disastrous weather conditions during the producing season develop and unusual pest and disease hazards are incurred, the situation should look very much more favorable when the new crop comes along.

Food Outlook—Continental Europe

Total food supplies in Continental Europe, exclusive of Russia, this year are estimated to be from two to three per cent below those of 1941–42 and about 15 per cent below the prewar average, according to the semiannual survey of the Office of Foreign Agriculture Relations of the Department of Agriculture. This estimate is based on a roundup of all of the information available to date on 1942 crops.

In summarizing this year's food situation by countries, the survey indicates that per capita consumption in Germany and countries under its direct administrative control will show little change from the rigidly restricted levels of 1941–42. Italy's urban food situation is expected to continue difficult through 1943 mainly because of distribution difficulties. Food conditions in France are certain to deteriorate further if the cessation of imports from Africa is not offset by a relaxation of German demand, and if distribution is not improved.

Because of their basic dependence on imports the outlook in Belgium and Norway appears gloomy. In The Netherlands the supplies of food available for normal consumers will continue inadequate but on the whole the situation there will remain considerably better than in France and Belgium. The standard of food consumption in Denmark is expected to deteriorate although remaining higher than in any of the other occupied countries.

Neutral Sweden, Switzerland, and Portugal will probably maintain a satisfactory food supply if domestic production continues to be supplemented by shipments from overseas. The situation in Spain is bad because of less than average output and distribution difficulties. Total food supplies in Greece are still far below normal. That country remains the worst problem area on the Continent although some relief has been made possible as a result of the distribution of imported wheat by the International Red Cross. In the Danube Basin the food supply situation is believed to be less favorable than it was in 1941–42, at least for the urban population.

In unoccupied Russia there is evidence of considerable food stringency among the civilian population because of the loss to the Nazis of approximately 40 per cent of the best prewar crop area and the large influx of refugees evacuated from the invaded zones. In the occupied areas the food situation is believed to be even worse, especially in the cities, due to a reduction in the crop area and continued requisitions by the invaders.

The food situation in North Africa had been deteriorating steadily up until the occupation of that area by the United Nations. Shortages of such imported products as peanut oil, sugar, coffee, tea, bananas, apples, dates and cotton textiles, which farmers usually buy in exchange for their own crops, stimulated hoarding by domestic producers. As a result supplies of domestic produce offered publicly for the urban population and for export to France were greatly reduced.—*Release from Office of War Information, USDA, March 3.*

The Preparation of an Emergency Ration for Use in Liberated Countries

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PLANNING rations or food shipments for mass feeding overseas in wartime presents nearly all of the problems that a nutritionist on the home front is likely to encounter, and needless to say, there are other problems that are new and different. Both jobs demand that nutritional needs be met by the use of available food materials that are acceptable to the persons for whom they are intended. The matter of availability is a real problem, especially in planning off-shore relief feeding. For either task the nutritionist must know as much as possible about the nutritional needs of the group, he must know what nutrients the available foods contain, and in addition he must have a fairly sound idea of how the foods can be brought together and combined so that they will be consumed.

The nutritionist planning to meet the relief needs of millions of people can hardly tackle the task singlehanded. The farmers, the food industries, the marketing specialists, the transportation experts and the group responsible for allocating strategic materials have a great deal to do with the final results. The ultimate consumer, too, has some part. On the home front, at least, the consumer still has some freedom of choice in selecting his diet, while many civilian populations abroad, near the battlefront, will only be able to accept or reject, we assume, the food that is offered—there would be no other alternative. At least this would be true in the early stages of supplying emergency rations when no other foods could be had. Consequently the nutritionist planning rations for mass feeding in devastated countries probably has a more receptive public to serve. This is the only respect in which he has any advantage over other nutritionists, and even of this he cannot be too sure.

The special headaches of the nutritionist and others who are planning to feed hungry people abroad arise from the scarcity of materials, the difficulty of determining which materials can be had in large quantities for the purpose, how they can be processed, shipped, stored, and prepared for consumption, since the planners do not know in advance when and how the food will be eaten, nor by whom. Also, the marketing, transportation and distribution questions are not separate considerations. They are an integral part of the whole and the nutritionist's function cannot be performed effectively unless the several parts are harmonized. The nutritionist, then, has to know what is transpiring in the solution of the related problems, and must gear his efforts to progress in the other aspects. If he attempts to work in a rarefied atmosphere to accomplish the objective of designing an adequate or nearly adequate diet, the job does not stand much chance of accomplishment.

The nutritionist believes that he knows in approximate, quantitative terms, which foods contain certain essential nutrients. He has a fairly good idea how much of each nutrient it would be well to supply. These are his principal tools. But this knowledge is by no means enough. In addition, he must learn something about the probable food supply, and this is not so easy as some might think. With the exception of grains and some legumes, supplies of food are apt to be very restricted. This much it is not hard to find out; the difficulty is in trying to discover what other foods can be obtained, how much and in what form.

Suppose the nutritionist starts by learning the kinds and forms of processed foods that have proved to be satisfactory in the experience of the Army and Lend-Lease. This is all very well but at once he runs into numerous obstacles, for many of the most satisfactory kinds and forms are out of reach for this purpose, being too scarce or too costly. Unless he is very determined that the problem will be attacked from a nutritional angle, and is uncommonly resourceful and energetic, he will think the task is hopeless and be ready to give it back to the commodity and marketing experts. Of course, he will not give up, for the nutritional needs are so compelling that he must stay on the job and solve the problem somehow, by devising rations that are highly nutritious, compact, stable under adverse conditions, and as palatable as possible, with the use of a minimum of the scarce commodities.

The Interdepartmental Committee on Food Relief has given the nutritional angle some consideration as

a part of the total problem. The Bureau of Home Economics, responding to several requests for such help, and working with the committee, has consulted with the Army, various agricultural experts and others to find out which foods and what forms of food that meet the above-mentioned qualifications are or could be produced. Estimates have been made of the nutritive value of the several foods under consideration, using a limited number of analyses and assays, or computing their probable nutritive value, if necessary, from the best information available. Rations have been designed from these foods to meet the several supposed conditions. It was necessary to attempt to visualize the conditions by means of information gleaned from the press and the radio.

My own part was to devise emergency diets or rations for use in liberated countries behind the lines. The specific set of conditions that the emergency diets were devised to meet included complete absence of foods other than those we could supply and very primitive facilities, if any, for preparation at the point of consumption. We planned ready-to-eat or easy-to-prepare rations with a high proportion of grain and soy products. We assumed that the recipients might have to live on them exclusively for several weeks immediately after reoccupation.

Dry skim milk was used as a source of efficient protein to supplement the proteins in soy and wheat, as a source of calcium and of the needed B-vitamins, especially riboflavin. Brewers' yeast furnished additional riboflavin. It was put into a soup mixture, where it is a desirable, and for this purpose, a very important constituent. Thiamin, naturally, was no problem in such a combination. By the time we had juggled the amounts and devised rations that contained the necessary riboflavin there was more than an adequate amount of thiamin.

Vitamin C was practically absent in all of the food materials which the economists believed we might reasonably expect to obtain. Vitamins C and A, then, were the greatest problems. In reply to the question "Could we get synthetics or concentrates?" it appeared unlikely that these could be acquired in quantities sufficient to supply very large numbers of people in 1943. It is important to remember that fruits and vegetables are bulky in the fresh form, and that these as well as the dry and otherwise concentrated forms are very scarce and highly sought after by the fighting forces. Besides, the ascorbic acid is largely destroyed in most vegetable and fruit concentrates except those of citrus fruits.

We first proposed supplying vitamin C in the form of legumes, that is, dry viable seeds that could be sprouted, corresponding to the methods used in the Australian Army. By means of rather primitive methods, the Australians have devised a procedure whereby peas or beans can be sprouted in a period of four or five days. Some soy beans and peas are fairly well suited to this purpose and are available here; the most favorable for this purpose, mung beans, are not. This method needs further investigation but sprouted beans or peas may be the solution if we cannot get enough of the citrus concentrates in cans, such as we send to England for the use of children under three, or of the lemon powder with added ascorbic acid, such as the Army uses in the emergency rations.

Vitamin A, perhaps, can be acquired as fish liver oil preparations, although the available supply, it seems, is being held for another purpose. To meet the need, a fat more highly fortified than margarine which carries vitamin D as well, has been included in the ration plans.

The rations furnish the other needed nutrients, not mentioned specifically above, at levels as close as possible to the National Research Council yardstick.

The ration plans have developed to the point where 2000 calories is provided in an amount weighing slightly over one pound per person per day. No metal or glass containers are used except for items which have been included especially for infants. Only foods that are stable under adverse conditions of storage have been used.

The present emergency rations—there are four such which have been planned so far—contain two to four ounces of a precooked dry soup which contains brewers' yeast, dry skim milk, dry peas and seasoning; three or four ounces of a precooked reinforced cereal; and one to five ounces of a biscuit identical with one of the two the Army uses in the K-ration; a peanut butter-soy spread to use on the biscuit; some fat that can be used either as a spread or in the soup; and vitamin C in the form of beans or peas to be sprouted, or, as alternatives, the citrus fruit concentrates previously mentioned. For very young children, whole milk was included in the dried or evaporated form, as well as citrus concentrates or tomato juice. These rations contain no meat, fish or poultry, very small amounts of dried eggs, or none, and no vegetables or fruits except those mentioned.

Since some of the components are not overly plentiful, the next thing is to see if they can be obtained in sufficiently large amounts by expanding production of some commodities and by making government purchases. Also, the acceptability of the rations needs to be tested by trying them out on some human guinea-pigs who, we hope, will oblige by eating them exclusively for several days in succession to see wherein improvements and adaptations should be made. Nutritionists must follow through on the task, otherwise it has only paper value for the moment and will not accomplish the desired objective—that of seeing that the principles of nutrition really govern the final determination. Again, we cannot withdraw into the rarefied atmosphere of our office or laboratory and write up more or less abstract plans. We need to design and redesign these plans every time there is a change in the supply of food materials or in the conditions to be met.

Preparations for Longer Time Feeding in Liberated Countries

ESTHER F. PHIPARD

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SEVERAL million people are looking to America for food. Already it is needed desperately in many countries. There will be continued and extended need throughout the rehabilitation period. Planning must begin at once if we are to be ready to move food supplies into these countries as fast as they are freed by the United Nations.

The problem of supplying food on such a large scale raises a number of questions that need to be considered before deciding what our policy should be. It may be assumed at the outset that there is not enough food immediately available to give every one in need a reasonably adequate diet. How then should we distribute the food that is available? Should we start with physiological requirements and then set about trying to meet these requirements to the extent this is possible or should we start with supplies and see how best they could be utilized? Should we try to spread them thin and provide for as many people as possible or should we aim at a fairly adequate level of feeding for a smaller number? If there isn't enough food to go around, should any special groups—children, for example—come first? To what extent can customary food habits enter into plans for relief feeding?

It is difficult to think in terms of meals for millions. Rather, one must think of the needs of a man, a family unit, or a group of children; planning then becomes realistic. Where possible, total food requirements should be developed, country by country, provided estimates can be obtained of the numbers of people to be fed, and of the kinds and quantities of food likely to be in the country at the time of liberation.

It is assumed that in each country there will be several kinds of food situations which will need to be met in different ways. For example, in some places where devastation has been widespread, there may be no food at all and no means of normal food preparation, even if food is brought in. For such emergencies there need to be complete, ready-to-eat rations that can be prepared and served on short notice. (Suggested rations of this kind are described elsewhere.)

There will be other situations where living conditions are more normal, but where food supplies are exhausted. In such cases an entire town may need to be completely fed for some time or until domestic food production and orderly distribution can be restored. Food rations for such situations should be designed to meet minimum nutritional requirements in order to prevent any further physical damage.

It is believed that some food supplies will be found in each country, probably concentrated in rural areas close to the point of production. There will be other areas where some food may be available, but supplementary supplies will be needed to round out even a fair diet.

The foregoing assumptions as to the probable food situations in the various countries, and the numbers of people to be fed under different circumstances, are basic to the calculation of total requirements. Among the tools needed to make these estimates are a knowledge of physiological requirements of individuals of different sex and age, and a knowledge of food values. In addition, it is helpful to have information on prewar consumption if rations are to be acceptable for an extended period.

ESTIMATING FOOD NEEDS

As a temporary goal for relief feeding, an intake of 2000 calories has been suggested as a level below which it would not be safe to go for a period of

months. It is not difficult for a person trained in the calculation of adequate diets to suggest a combination of foods that will yield about 2000 calories and at least two-thirds of the recommended quantities of protein, minerals, and vitamins. The problem becomes much more difficult, however, when one is restricted by the kinds and quantities of foods likely to be available for relief feeding purposes. There is also the question of weight and bulk. Because shipping space is so limited, only those foods that are concentrated sources of food values and that will pack and store well under possibly adverse conditions can be considered.

A complete maintenance ration for use when no other food is to be had may well be built around grain products of which there is an abundance in this country. They are concentrated foods; they can be stored; and they are a basic food in nearly every country in the world. It is important to consider the most economical form in which to send grain products. For example, wheat in the entire grain form contains larger quantities of minerals and vitamins than does the white flour to which we have become accustomed and which many groups in Europe have come to prefer. However, when we are trying to make every ounce of food count toward good nutrition, we must decide whether we should send a refined white flour or the entire wheat, or whether there is some intermediate stage of milling which will be acceptable and will still retain a high proportion of original food value.

To supplement the wheat or other grains, it would be desirable to send milk in some form into every country. However, it is apparent that there will not be enough milk to go around. Hence, other foods must be found that supply the calcium, riboflavin, and other nutrients which milk would have furnished. Soy bean and peanut products suggest themselves. But these foods are unfamiliar to most people in the western European countries. If they are to be used, much thought should be given to the way in which they are to be introduced.

In planning a maintenance ration for a particular country, it is desirable to consider the customary food habits. Prewar food consumption data can serve as a guide to the kinds and quantities of foods that would be acceptable. Although it would be impossible to duplicate the usual diet, at least we should try to avoid such errors as sending huge quantities of beans to a non-bean-eating country.

PLANNING FOR DISTRIBUTION

Careful planning for satisfactory rations is but the first step. The problem of administration is equally important, for no matter how well the diet is planned on paper and how good the food is that is sent, the best of plans can come to naught unless there are adequate provisions for distributing and administering the food. Precautions must be taken to see that the complete ration goes to each distributing center, and not wheat to one place and fat to another. A satisfactory system of issuing food to individuals or families, or in units for group feeding is another point that is vital to the success of the entire program.

Each country will need, in addition to special rations complete in themselves, supplies of certain foods to supplement those that are domestically produced. The kinds and quantities needed will vary from country to country. In deciding what to send, here again the aim might well be to provide on a per capita basis about 2000 calories and at least two-thirds of the recommended allowances of each of the nutrients. Here again customary food habits should be taken into consideration where possible within the limits of supply.

A good program of relief feeding should include special provision for children and for pregnant and nursing mothers, because of the high nutritional requirements of the growth process. It is essential to the future welfare of nations that the younger generation of today be protected from the ravages of nutritional deficiencies. It is especially important that body needs be met in infancy and during adolescence —the two periods of most rapid growth.

An attempt should be made to provide all infants with a complete and adequate food supply. Special reserves of milk (preferably evaporated) should be earmarked for this purpose. In addition to milk, the ration might well provide a precooked cereal reinforced with iron and thiamin, a small amount of sugar, dried egg if possible, and some source of vitamins A, D, and C. It is likely that ascorbic acid (vitamin C) tablets might present less difficulty in administration than citrus fruit juice. In the case of breast-fed infants, the special ration should be given to the mother as a supplement to her regular diet.

The food needs of older children and pregnant mothers could be taken care of through special additions to the regular types of rations. This could be handled at the point of distribution. It is important to see that the needed quantities of milk products, fish liver oil concentrates, and other sources of essential nutrients are included in estimates of food requirements, country by country.

SUMMARY

A preliminary estimate of the magnitude of the problem of preparations for longer time feeding in liberated countries as a whole is appalling. It indicates the urgency of mobilizing total food resources not only in the United States, but in other countries. There are several jobs to be done. First of all, there is need for careful estimates of food requirements, country by country. Next must come plans for the accumulation of food supplies to meet the requirements. In addition, detailed directions for allocation and preparation of special rations need to be worked out. Finally, the responsibility for the success of such a program will rest upon its administration in countries where it is to operate.

Yugoslavian Plans for Restored Food Sufficiency

GEORGE RADIN

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YUGOSLAVIA is having the fortune and misfortune of experiencing that which befell Serbia twenty-five years ago. Consequently many of us know what the conditions of the country are going to be and what will have to be done immediately.

In looking at the map of Yugoslavia, we see that the country is divided into three parts, two from the former country, Austro-Hungary, now known as Croatia and Slovenia, and the third part, Serbia. Serbia, including Mosnia-Hercegovina, is the territory we must especially consider because that is where the devastation is going to be. No country was hit nearly so hard in the last war as was Serbia. She lost almost one-third of her population, practically her entire youth having been wiped out. American relief workers in Serbia after the last war remember how sad were the population of that war-ravaged country when they had to accept relief. Relief was not what they wanted. They were looking for help to organize their own economy. They asked for farm implements, for seeds and for domestic animals. They looked upon relief as a necessary evil, to be stopped as soon as possible. In December 1918 and January 1919 a special commission of the American Red Cross, consisting of seven experts, was appointed to investigate the needs of southern European countries. The commission, headed by Mr. Homer Folks, submitted the following report about the conditions in Serbia:

> A paralyzed country, no banks were doing business; no schools were open for the children; the state university was closed and its buildings partly destroyed. There were practically no doctors, no Serbian hospitals, and disease was everywhere. The stores had little to sell except local food supplies; some regions would have been starving except for the American Red Cross aid; nobody had sufficient clothing; practically no fuel was to be had, and nearly everywhere no means of lighting; no factories were in operation; no mines were operating. There were no means of transportation, no through railway, no horses, no mules, no automobiles, no gasoline, no trucks, and but few oxen. A very small fraction of the normal volume of public business was being transacted. There were almost no men between eighteen and fifty; there were almost no children under the age of three.

This report was written in January 1919. About that time many Americans were stationed in various parts of the country to set up relief organizations, to help "little Serbia" as they called it tenderly. I was asked to join and left Columbia University at the end of the semester in 1919 to become a relief worker. My first assignment was to start from the Greek border and go up to Belgrade, visiting every village in order to see and report how many children, particularly orphan children, there were, and how many people were in actual need and what were their needs. It took me several months to cover this first assignment and I found many amazing things. Instead of food, people were asking for things that produce food. They wanted plows, cows, seed, and agricultural implements—for it was an agricultural country. That was not my experience alone; other relief workers reported similarly. The relief period in an agricultural country like Serbia usually ends with the first crop. In Serbia it ended because of the resentment on the part of the population toward relief. They took it as a necessary evil, to be stopped as soon as possible. In fact, the attitude toward relief as an evil was so strong that the government at Belgrade had to ask us to stop giving relief at the end of the harvest in 1920.

We sensed a tremendous problem in trying to discover just how to go about discontinuing relief. The people had lived under a sleeping conqueror, Turkey, for over four centuries. As a result, agriculture, the means of the people's livelihood, remained very primitive. Health conditions were appalling.

We had a little money left from our American funds and tried to determine the extent to which it could be used for reconstruction purposes. A Serbian doctor pointed out the way and we followed enthusiastically. He said that we should establish health cooperatives, since the people of the country were accustomed to living, working and playing together. Through cooperative organizations they bought their wheat and farm implements; why should they not buy their medicines in the same way and have a doctor come to see them rather than going to him? Since the nearest doctor was often forty or fifty miles away, the seriously ill patient, traveling by oxen, seldom reached him alive.

We started six of these cooperatives with American money. They were modeled after the agricultural cooperatives which in turn had been established after the Rochdale plan in England. Then we started out to tackle the health problem and as time went on we found ourselves in very serious difficulty. Medicines cost money. The doctor of the health cooperative had to be supported. The peasants were poor and their means of production primitive. These people did not have time to think constructively, to help raise the standards of living or to improve their means of production, having been forced for centuries to fight for their liberty—as they are doing again today.

In due time, a special committee of the National Health Cooperatives was created, known as the Committee on Education. It was composed of the outstanding men in agriculture, health and education. The committee's principal duty was to make plans to *help the peasant help himself*; to raise better poultry, better swine, to provide better food, better milk for his children. We saw the seriousness of the problem and with some eighteen men and women on this committee, we organized individual projects to instruct the peasant.

Probably the most important project was the education of women. We created what we called domestic schools, traveling units to which we assigned teachers, usually connected with our organization, who went into the villages to teach the peasant girls. It was very pathetic to watch these girls and see how anxious they were to learn and how limited were the possibilities. You may be surprised to know that as time went on, when the youths were ready to marry, they selected the girls who had received a diploma showing that the course had been completed. In fact, a diploma became more important than a dowry, for the men knew that it meant a great deal to their future and the future of their babies.

When I first came to this country, America, my first thought was what my friends in the cooperatives would want me to do for them while here. America has had the good fortune to live in peace many years and the people have had the opportunity to become enlightened in scientific agriculture. God was good and He gave you resources and the spirit—especially the spirit—of the people who made this country what it is. We in Yugoslavia are looking for a like opportunity. I know that my cooperatives want me to appeal to you for technical skill. Here many good men and women are helping me to amplify the projects already started in Yugoslavia and to initiate as many new ones as possible. I believe these activities will satisfy the wishes of my people for they are looking for things that make dollars and not for the dollars themselves.

Your country is fortunate in the richness of the spirit of the people, so I have no difficulty in finding interested collaborators. In Yugoslavia we were never fortunate, for instance, in securing cooperation on a project for a minimum standard of nutrition. The committee realized the need, however, especially after the commission made a survey of the food habits of the people. Many of the children were very poorly fed and members of our committee who were assigned to study food habits on their return declared, "We will have to think about balancing the diet."

I often hear about sending supplies to Yugoslavia, foods such as these poor people ate before, but that is just what we are trying to avoid. We need to help them to raise more vegetables and fruit, to can the food, to preserve it so that they will have nearly as much for the winter as they do in the summer.

The plans we are now making stem from our long years of experience in Yugoslavia between the two wars. Of a population of 16,000,000 people, about 80 per cent obtain their livelihood from agriculture. It is a land of small land owners. What they want is to cultivate their own land after they lay down their guns, and without losing a single crop. Hence, they want the tools—they want farm implements, seeds, cattle, swine, poultry, and sheep. To be sure, they will also be in serious need of medicine and hospital equipment. They will want many skilled men and women—doctors, nurses, experts in modern agriculture and in related industries.

Pending the end of this war, we are taking advantage of science and experience in modern agriculture to amplify these projects for rehabilitation of Yugoslavia. The plan includes soil conservation service and rural electrification; cultivation as promptly as possible of better poultry, better hogs, better cattle, better sheep, better fruit, better corn and wheat—in general, better animal and plant life. We are going to organize dairy industries and other industries needed for processing and marketing agricultural products. The plan also includes a project for the establishment of a minimum standard of nutrition, and home economics as well as agricultural extension education.

Since no peasant can do much for himself without help, and because the vast majority of them own

an average of 12 to 15 acres of land, whatever is done for them must be based on cooperatives, a system to which they are well adapted. Traditionally, as I have already said, cooperation is their way of life. They love to live together, to work together, and to play together. Hence the various plans and projects that we are developing are based on the people's attitude as we found it in 1919: "Relief is a necessary evil. Help us to get on our feet. We want to feed ourselves."

U. S. Food Contributions to the War Effort

Last year, military and Lend-Lease needs together took between 12 and 13 per cent of our food production. More than half of the food for those two uses went to our own forces—56 per cent as compared with 44 per cent for our allies. In a speech last week, Secretary Wickard gave some interesting information which should be known to every man, woman, and child in America:

"Nearly all of the Lend-Lease food was divided between two of our allies. About three-quarters of it went to Britain or other parts of the Empire, and about a fifth of it went to Russia. By the end of the year, however, the trend of shipments to Russia took a sharp turn upward. In December, for the first time, the shipments to Russia were larger than the combined shipments to the United Kingdom and other British destinations.

"Practically all of the food we sent to Russia went directly to the Red Army. Wherever it went along the long eastern front it helped deal the heaviest blows that have yet staggered Hitler's army. I am proud to think that American food helped break the siege of Leningrad, helped hold Stalingrad, and helped crack the Nazi lines in the Caucasus.

"The principal products we sent to the British last year were cheese, dry and evaporated milk, dried eggs, canned meats, cured and frozen pork, and lard.

"The Russians last year took sizeable amounts of dried eggs, canned meats, pork, dried beans, and wheat and flour. But their crying need was —and is—for edible fats and oils. They asked for tallow, lard, linseed oil, fatback and butter.

"Incidentally, the 1942 butter shipments to Russia came to 17 million pounds which is about one-tenth as much as our Army required, and less than one per cent of our total supply. There has been criticism of our sending even that much. I don't believe we should begrudge a small shipment of butter to an ally who is fighting so bravely and is doing so much to bring the final downfall of Hitler's power. In fact, the butter shipments that bother some people were a small fraction of the fats and oils we sent to Russia. The Russian soldiers are spreading lard on their black bread. They are eating the tallow and the linseed oil. The Russians especially want some of their fats to be in the form of butter for their soldiers—the soldiers who are rolling back the Germans in subzero fighting. I am glad we could send it to them, and I am sure you are, too.

"I believe there have been more complaints about shortages of beef than of any other one item. It may surprise you to know that only a fraction of one per cent of our last year's beef production went to Lend-Lease in 1942. About one-eighth of our record production went to our own armed forces. If our total civilian consumption of beef had been larger the extra amount would have come out of the supply for our boys in uniform. It is the same story for processed vegetables, dairy products, and eggs."—*From an address by Dan A. Wcst, FDA, Baltimore, February 4.*

Editorial

FEEDING IN LIBERATED COUNTRIES AND NUTRITION EDUCATION

The aims of the Conference sponsored by the Committee on Food Habits of the National Research Council in Washington January 23, the papers presented at which precede this editorial, should interest dietitians and nutritionists, for they suggest a new and important emphasis in nutrition teaching. The papers were presented as examples of the kind of materials which could be used to build increased interest in a knowledge of nutrition, especially among men, at a time when such knowledge is especially important and to establish a background of intelligent interest and understanding of the problems of feeding liberated countries which will increase the American people's appreciation of the relationship of food and nutrition to war and peace aims.

As Dr. Margaret Mead, Executive Secretary of the Committee on Food Habits, suggests, the problems of feeding the peoples of liberated countries bring to the foreground the whole range of American attitudes toward food and nutrition: the appeal for the use of food as a weapon not only in feeding our own and allied armies but in obtaining and keeping the cooperation of the peoples of liberated countries; the appeal to American generosity on behalf of those who are starving; criticism of existing methods of food distribution within the United States; fear that we will be left without enough to eat at home because we are undertaking a gigantic and endless task; distortions and exaggerations of the relief and rehabilitation work which must be done; an increased interest in the whole problem of food supply and nutrition.

Dr. Mead points out that the American people's support of a program of feeding the liberated countries will depend upon an equitable and well-administered system of distribution and rationing in the United States which can be developed and maintained, no matter what accidents of weather or natural catastrophe interfere with the size of the harvest. Maximum production will, of course, greatly simplify the problem of obtaining public support, but where food restrictions are inevitable, it is of the utmost importance that the American people should know that food is being distributed with absolute fairness. Willingness to go without that others may eat is directly dependent upon trust in the fairness of our own rationing system.

It was the thought of those who planned the Conference that problems of food supply and feeding in liberated countries offer an unprecedented opportunity to teach nutrition to the American people in a way which will be objective, technical, factual and interesting. The public needs to know the conditions in liberated countries, what the existing rationing conditions are, what is happening to the food now being grown in those countries, what pertinent evidence there is about birth rate, death rate and deficiency diseases. Presented in concrete terms, the food problems of each separate country will furnish new and challenging illustrations of the way in which science is applied, as American brains and American materials undertake a difficult job.

We concur with the viewpoint that knowledge of the actual conditions and the measures taken to meet them, and pride in American skill in meeting them, will be more useful in ensuring an understanding public backing of relief and rehabilitation problems than will a simple appeal to humanitarian motives and mere statistics of the amounts of food which we are able to send, without this knowledge. At the same time, emphasis on the details of the task should and will reinforce the necessary nutrition education here in the United States.

PRODUCE—CONSERVE—EXTEND FOOD SUPPLIES

Below-freezing temperatures and heavy frosts during the early part of February caused widespread damage to winter vegetables throughout Florida. Lack of rain in Texas slowed progress of commercial truck crop districts in Texas. This means less snap beans, green peas, tomatoes, Lima beans, strawberries, and potatoes in the markets and less for food processing. Other crop failures, too, may distort the production goal figures for 1943. On the other hand, "bumper crops" in certain areas may unexpectedly compensate for reduced production elsewhere.

What can we as dietitians and nutritionists do about all this? We are not expected to be food producers directly, and very few of us will be even in a small way, but we can stimulate interest in and

encourage the planting of Victory Gardens for local food production. Each plot of land, even hospital grounds devoted to the cultivation of flowers, should be looked upon as potential gardens for edible crops. We can familiarize ourselves with the kinds of food plants which yield the most in terms of vitamins and minerals per square yard of ground and for the effort expended and learn what soil tests are necessary, what tools are needed, etc. Literature containing such information is readily available from government agencies and in the newspapers and magazines. It has been suggested that local merchants buy and sell local surpluses from Victory Gardens, since there may be some curtailment of long hauls in transporting foods. This suggests an interesting community project and an incentive for those who can grow more than they need for themselves.

Beyond this encouragement in the production of food, the dietitian's real job is to conserve existing supplies of foods to the utmost, especially animal protein and fats, and to make adjustments to the increasing restrictions with the least possible audible fuss. In a statement to the press February 25, Secretary of Agriculture Wickard said that the food supply situation today warrants neither complacence nor hysteria. He added that it does call for adjustment in food buying and eating habits. Dan A. West, of the Food Distribution Administration, in another release, emphasized this last thought and said that the changes that will have to be made in our daily lives in order to ensure adequate food for our armed forces can be regarded as only minor inconveniences, sometimes as petty annoyances, not as "sacrifices"—that word should be reserved, he said, for the contributions of the men on the battlefields.

Those who are in charge of restaurant food service know by now that they will be able to serve only one item from each of five classes of restricted foods to a customer each meal, and that choices among these will be limited, also that the size of meat portions may be established. These limitations are considered very important, for it is said that rationing in England came nearest to "bogging down" through the lack of restrictions in restaurants. Perhaps explaining this fact to the public will help to secure cooperation in this difficult quarter.

Flexibility in menus and marketing will probably be the watchword from now on. The food industries have already shown a remarkable versatility. For example, as the January *Ice Cream Trade Journal* points out, the ice cream industry, when faced with curtailment of production to conserve milk and cream for other uses, planned to adapt its equipment to the freezing of fruits and vegetables. Other conversions to war conditions, and further rationing of scarce foods with accompanying increases in foods such as peanut oil and sauerkraut, will mean constant shifting in the supplies of available foods and the need to "convert" menus and recipes and especially nutrition education emphasis, in order to keep the American people well fed and at the same time well informed concerning the part they must play in solving the all-important food problem.

THE THEORY OF SPECIFIC IMMUNITY

The current overemphasis of the role of the vitamins and the resulting neglect or underemphasis of the import of protein in nutrition, merit due consideration by the dietitian, specifically with regard to the relative role of each of the foregoing dietary factors in promoting antimicrobic resistance.

The theory of specific antibody production has numerous practical applications to nutrition and physiology in wartime, according to an authoritative viewpoint reported editorially in the *Journal* of the American Medical Association (p. 1309, December 19, 1942). It is believed that these protective antibodies are newly formed chemical complexes, "synthesized as a result of the action of normal intracellular enzymes," and that a high-protein diet leads to an increase in fixed tissue protein reserves with parallel increases in circulating serum globulins. The importance of a "luxury protein diet" is therefore suggested for the maintenance of adequate protein reserves to serve as basic materials for "specific antibody templation." Further, the body's immunologic potential would vary according to the extent of the locally available protein reserve.

It is pointed out that there is statistical evidence of the relationship of increased susceptibility to infectious diseases and dietary insufficiencies during wartime and that this relationship has been confirmed, using experimental animals. Moreover, accumulated evidence supports the relationship between protein reserves and specific immunity. The basic importance of a luxury protein intake should not, therefore, be underestimated, since protein beyond the requirements for nitrogenous equilibrium is required to make antimicrobic vitamins immunologically effective.

DR. SHERMAN HEADS BUREAU OF HUMAN NUTRITION AND HOME ECONOMICS

Consolidation of two agencies in the Agricultural Research Administration to form a new Bureau of Human Nutrition and Home Economics, together with the appointment of Dr. Henry C. Sherman as its Chief, was announced on February 21 by Secretary of Agriculture Wickard. The agencies consolidated are the old Bureau of Home Economics, and the Division of Protein and Nutrition Research of the Bureau of Agricultural Chemistry and Engineering.

In commenting on the appointment, Secretary Wickard said: "Immediate expansion of the nutrition and food research of the Department is vital to

carrying out our responsibilities to civilians and the armed forces under war conditions. No man in the United States is better fitted to head this work than Dr. Sherman, Mitchill Professor of Chemistry at Columbia University. He has long been recognized as one of the world's outstanding authorities on nutrition. . . . The new Bureau of Human Nutrition and Home Economics will, of course, continue its work in other fields of home economics, to which it has made many contributions. Dr. Hazel K. Stiebeling, who is well known for her work on food consumption and the application of nutritional science to practical needs, will continue as Assistant Chief of the Bureau."

In addition to the laboratories and personnel of the present Bureau of Home Economics, Research Administrator E. C. Auchter pointed out that Dr. Sherman will have valuable additional laboratories and personnel at his disposal through the transfer of the Protein and Nutrition Division. This agency, headed by Dr. D. Breese Jones, has done much to advance our knowledge of the nature and functions of the proteins in food, a field that is one of the most complex and important in human nutrition. Early in his research and teaching career, Dr. Sherman began to emphasize the need, now considered basic in nutrition, for dealing with nutritive factors in quantitative terms. He was among the first to study intensively the quantitative requirements of human beings for protein, calcium, phosphorus, and iron. It was in his Columbia laboratories that some of the early work was done on the quantities of vitamins A, B, and C in foods and he was one of the first in this country to make compilations of the quantities of known nutritive factors in a wide range of foods. As a foundation for this work he helped to establish methods of measuring vitamin content in terms of "units" long before the vitamins themselves were chemically isolated or understood.

Naturally Dr. Sherman needs no introduction to readers of this JOURNAL, many of whom were his students. In fact, his published works have formed the basis for the now well-established program of modern nutrition education, in the development of which immeasurable credit is due to his teaching and scientific ability.

Current Comment

NUTRITION AT WORK IN THE SCHOOLS[1]

WINNING S. PENDERGAST[2]

War has come to the American school child, just as it has come to his father and mother, his older brother and many of his teachers. His school runs on war time. His classes assemble and dismiss at hours which least interfere with the public transportation of war workers. Once a week, at school, he buys war savings stamps and he is an ardent collector of salvage. If he is in junior or senior high school, his whole curriculum is being altered, as academic subjects make way for health education and physical training. And along with the other dear delights of peace has gone his inalienable right to a luncheon of mashed potatoes, banana cream pie and a chocolate bar, or the even more popular combination of "two hot dogs and a coke."

It would be going beyond the truth to say that the children are enjoying the change. But, like most Americans, they are in an unselfish mood, and they will accept with good grace any restrictions actually imposed by the war situation. And, if our theories are correct, they will thrive on the simpler menus which scarcities and rationing are creating. The fact that our children are now drinking "white" milk, eating fewer desserts, and getting along with little or no candy, does not mean that they will do all this when the war is over and the privilege of choice returns. If better habits of eating continue then, it will be for one of two reasons: either our customers will have learned to enjoy white milk, whole grains, eggs, green and yellow vegetables, or they will be choosing them because of the contribution they believe these foods will make toward their own good health. Either reason would represent quite a radical change from the present typical student point of view.

While as yet we have not been particularly successful in influencing this point of view, nutritionists have been at work for some time on a variety of fronts. For ease of discussion, will you permit me to make an arbitrary division of their work into educational activities and feeding activities, realizing of course that the processes are intermingled. The educational activities fall into three categories: those conducted by agencies allied to the board of education; those conducted as part of the academic program of the board of education; and those conducted as a part of the school lunch program.

School feeding, too, falls into different phases; there is the regular lunch service, the food service carried on by allied agencies, like the now defunct WPA nursery school project, and a whole new series of services which are necessitated by the wartime situation. I will try to cover each of these activities briefly beginning with the educational program.

There are several public service agencies which carry responsibility in our nutrition education program. The visiting nurses, the visiting housekeepers, the department of public welfare, all are closely associated with the families of our children, and many times in talking about family nutrition

[1] This and the following three papers were presented before the American Dietetic Association at a session on Nutrition at Work at which Helen S. Mitchell, Principal Nutritionist, ODHWS, Washington, presided.

[2] School Lunchroom General Supervisor, Detroit.

they have an opportunity to interpret the school lunch program to the parents.

The school nurses, working under the Board of Health, also carry the school lunch story to the home, likewise nutritionists who work with us in many ways. They are often called on to talk at the school on health programs, or to provide speakers for PTA meetings. At the request of the Board of Education, the Detroit Department of Health is just now completing a survey of the nutritional status of all school children within a certain area—one in which there are no school lunchrooms and in which this service is to be introduced. A survey now and a second in June will provide a means of evaluating the contribution of the lunch to the welfare of these students.

The schools themselves are not laggard. In the Detroit Public Schools, which are fairly typical of city educational systems, units on nutrition education are offered in the Health Education Department, the Home Economics Department, and in General Science.

In the Health Education Department, work throughout the lower grades is climaxed by a compulsory intensive course in the tenth grade. In the Home Economics Department, nutrition education reaches some elementary children, all of the intermediate girls, about half of the high school girls. Units on nutrition education appear in the general science curriculum, receiving most emphasis in the ninth grade.

A committee on nutrition, composed of department heads in the various divisions of instruction, agreed that the real need was not so much for additional class instruction, as for methods of making the information which students now possess more meaningful and significant.

We are all familiar with devices which have proved successful. For an excellent summary, *see* "Nutrition Education in School Lunchrooms" by Constance Hart in this JOURNAL for October 1942. In an interesting study (Conference of Food Service Directors 1941) of food habits and methods by which good nutrition is taught in school lunchrooms, covering 102 schools in 14 states and the District of Columbia, Helen Hobson reported that: "The study showed, first, that effort is being made to teach better food habits through the school lunchrooms by various media, namely—the special plate lunches, effective displays, use of school radio, the school paper, movies, and by participation of the cafeteria staff in school health programs."

The Detroit Public School Nutrition Education Committee decided that one means of making nutrition a more engrossing subject would be to center a large part of the discussions around the school lunch, or purchased lunches at various prices. It was also suggested that the school paper be utilized, with quiz columns, timely articles on the national food situation, and the like.

All such efforts within the school add significance to the educational activities which the busy lunchroom manager can carry on herself. Doris Zumsteg, writing in the February 1942 *Forecast*, reports that through striking pictures and posters and the use of weekly handbills, she is presenting food facts, one at a time. Good work of this type is being done in many places, but it needs to be supported by the rest of the school. An integrated program is still the greatest need.

In many cities, as in Detroit, we believe we have the beginning of a real school community program which is coming to us as a dividend from our war effort. Schools with lunchrooms have been designated as shelters by the OCD and in order to provide emergency food service, staffs have been recruited in part from regular lunchroom employees, in part from public-spirited women in the community. Their training consists of 20 hours of lecture work on nutrition and feeding and some practical experience in a school or hospital kitchen. A staff of some 30 volunteer nutritionists are accredited as teachers, and the experience in school lunchrooms is under the supervision of our home economics-trained managers. Out of this experience is coming a new awareness of the school lunch on the part of many mothers, and a more intelligent interest in the meal away from home. The work of these agencies, together with current publicity on nutrition in magazines, radio and newspapers, makes us hopeful that we are beginning to influence students' attitudes toward food.

Nutrition at work in the actual feeding of children appears to be reasonably successful. We do know that our menu pattern, perforce, is going to be increasingly simple, but we see nothing to indicate yet that our meals will not be nutritionally adequate. The restrictions on sugar, the shortages of cocoa and fats, all point to an obvious solution—rationed desserts. We began to limit desserts, one to a customer, in September 1942.

To cope with the problems of delivery, storage, procurement of supplies, and labor shortages, managers in every type of food service are drastically simplifying menus. We are streamlining ours. Our menu has been reduced to a 13-cent and a 30-cent lunch, with combinations of the individual items permitting a price range within these figures.

Referring again to Miss Hobson's study, I quote: "Giving maximum food value is another goal toward which the majority strive; in some instances by fortifying foods with dry milk, wheat germ, and similar products, and in the particular emphasis expressed by many in the care and preparation and cooking of vegetables, serving of fruits, milk and other food considered necessary for the growing boy and girl." This is a definitely discernible, though not widespread, trend. It is to be hoped that it will

not be reversed as the demand for dietitians in the armed services draws off the trained managers in civilian services.

A sound nursery school program is a splendid introduction to the elementary lunch. The children meet the same luncheon dishes, the same raw carrot and celery sticks, the same simple desserts. Their introduction is usually in pleasanter surroundings than we offer—the nursery dining rooms are brighter, quieter, the tables and chairs small, and the children help set the table and serve. We wish we had the time to do as well when the children enter the elementary school.

A third type of feeding activity, the emergency service of food in situations growing out of our new patterns of living, now confronts us. The shortage of gasoline means that mothers are not calling for children and taking them home to lunch; policemen have been taken from traffic duty on busy corners which children cross at noon; many mothers are working; in vocational schools, shops are running 24 hours a day and men in the night classes are asking "When do we eat?"

Had such requests for service come even six months ago, we would have been delighted, for most school lunchroom people believe that the school lunch is a valuable experience for every child. Now this demand is an acute embarrassment. Our priority rating gets us no equipment; our vendors beg to be excused from their commitments and register acute anguish at any suggestion of extended service. And our employees enthusiastically resign for work in the factories. Faced with these undisputed obstacles to expansion of our program, we are very likely to hear ourselves saying that we are feeding to capacity now, and that it will be quite impossible to do anything about meeting the new needs.

That may, indeed, eventually prove to be true. But, before we admit that we are defeated in meeting any actual need, we should spend a great deal of effort and exercise ingenuity in opening new approaches, in improvising makeshifts, even though they may be considerably below the standards with which we are familiar. For if there is a real need, somebody will meet it. If we fail, the concessionaires will do the job.

We are making gains on three fronts—the educational, the school feeding, and the home. It is too soon to say whether the gains are temporary or permanent. It would perhaps not be too great a self-deception if we permitted ourselves to believe that this is the generation that Dr. Sherman had in mind when he said: "Better growth and development, higher attainment in stamina and working efficiency, and a longer lease of healthier and more useful life, may all be realized in the same individuals through the fuller use of the newest knowledge of nutrition."

NUTRITION AT WORK IN THE RED CROSS

MELVA B. BAKKIE[1]

During 1942 the Red Cross demonstrated one method of group teaching in nutrition by means of nutrition and canteen classes. The results indicate that interest in nutrition has been aroused and we hope that the women have learned a little about better food practices. Instruction in nutrition and mass feeding was completed by 214,419 women and a few men in 1731 Red Cross chapters. They were motivated largely by national defense activities, the National Nutrition Program, and the war, and not so much by a canteen uniform as some might believe, since only one-fifth of this group completed canteen training which would entitle them to wear uniforms. Instructors have asked for uniforms but WPB rulings make this impossible.

The number reached through nutrition instruction represents a marked expansion in nutrition activities in Red Cross chapters. The accomplishment is a result of the efforts of class members and some 10,000 instructors, who gave up leisure time for these essential services. The expansion was accompanied by many difficulties. Women were clamoring for classes. Long waiting lists were built up. The recruiting of potential instructors began. Often classes were started before instructors could be authorized and supervisory aids set up in the Area office, and before teaching materials could be revised or prepared. The teaching which resulted ranged from very good to very poor.

In June 1942 a questionnaire on Red Cross nutrition and canteen classes was sent to chapters, of which 37 per cent were returned. Part of the information sought concerned significant problems raised by instructors and specific criticisms of instructors. Returns revealed a close connection between the problems and criticisms. For example, concern over teaching methods was correlated with criticisms of the ability of the instructor to impart her knowledge, insufficient teaching experience, lack of a plan for the day's discussion, or lack of interest in teaching. Likewise, subject matter problems were linked with criticisms by the students that the material was too technical. For instance, at the close of a lesson one woman remarked to another, "She is supposed to know her subject, but she certainly doesn't want anyone else to know it." Instructors' problems on the adaptation of materials to adults varying in age, education, and experience were associated with the criticism that instructors were accustomed to high school students but not to adults; and that of a drop in attendance following the first meeting, with criticisms of presentations as dry and repetitious.

A desire for a news-letter or some means of ex-

[1] American Red Cross, Washington.

changing ideas with instructors of other chapters was expressed. An interesting plan is credited to Dr. Flora Rose, an authorized nutrition instructor in Berkeley, California, who plans to hold an extra meeting upon completion of the nutrition course at which other members of a student's family will be able to express their views on the student's methods of applying her nutrition knowledge in the home.

The questionnaire also provided information on community resources which had been used for training in mass feeding. The usual resources of church and club kitchens, cafeterias, and hotels were being employed, but the most unusual was a county jail with 100 prisoners. The results in this connection were contented prisoners and requests from jailers in nearby counties for guidance on feeding prisoners.

The returns revealed that instructors, in general, used teaching outlines very rigidly, in some instances even to the extent of reading the lesson outline and even the textbook to the class! Teaching materials were used as a crutch, rather than a tool. Instructors had no realistic understanding of the communities in which they lived. As a result their teaching was neither realistic nor flexible. We have learned a great deal from the experiences of the past year. We appreciate more fully that good teaching is difficult. We are aware of the need for better teaching materials and methods. Refresher courses with more emphasis on teaching methods are needed. Those who reviewed subject matter last year might well concentrate on methods of adult education this year.

In order that we may have some indication of the carry-over of nutrition knowledge into the homes we are planning to make a nutrition survey. In doing so, we shall try to get a spread of communities, instructors, and class members. The plans and schedules are being developed in consultation with Dr. Dorothy Brady, senior statistician of the Bureau of Home Economics.

Frequently the question is posed, "Whom are we trying to reach in Red Cross nutrition classes?" This must be answered in terms of the problems which confront the various chapters. Demands for classes came as an avalanche from the club type of woman, representing moderate and upper-income groups, and chapters had to attempt to meet these. Consequently, in some chapters classes did not represent a cross-section of the community. It was time, however, that nutrition teaching was directed to this group since for many years it had been directed almost exclusively to the needs of low-income and relief families. Many of the women instructed last year were members or potential members of boards of education, or of health and social welfare agencies. Their interest and knowledge of nutrition should be reflected in the program-planning of these agencies.

Recently we have learned that several Red Cross nutrition committees are making spot maps to show the distribution in the community of the women who were reached through classes. An effort will be made to offer instruction to groups and neighborhoods which were not reached last year. The Red Cross is aware that classes are not the panacea for community nutrition problems, but as one method of group teaching they are often a plausible means of arousing widespread interest.

About one-half to two-thirds of the authorized nutrition instructors were active in teaching last year. Red Cross nutrition committees will try to interest all authorized instructors in being active this year. Special attention will be directed to recruiting retired home economics-trained women to relieve the demands for community service upon those who are employed.

The need for refresher courses for the prospective instructors continues. In areas where there are not enough qualified canteen instructors, we are planning to use lay leaders who have completed the required training for canteen service and who have teaching ability. They will be used only in the training of Canteen or Food Service Aides. The training will consist of ten hours of practice work in quantity food preparation and service.

Many who were active last year are asking for additional study and suggestions as to how they can best serve the community. Among the several opportunities for community service now under consideration is one which relates to the school lunch program. In areas where the Agricultural Marketing Administration reports interest in school lunch programs but lack of facilities or labor, the cooperation of the Red Cross Canteen Corps is requested and several corps are already participating. The pressing problem of satisfactory supervision is to be considered by the Cooperating Committee on School Lunches of the U. S. Office of Education.

Several chapters are developing cooperative plans with hospital dietitians for services of Canteen Aides who have had both nutrition and mass feeding instruction. We have appealed to the American Dietetic Association to work with us on a plan for using aides in the dietetic departments of hospitals in which the standard of service would correspond to that for Nurses' Aides.

With the growing opportunities for community service, teaching materials must be revised. Mass feeding training must be directed not only to emergency feeding but to other community quantity feeding projects, such as the school lunch.

Over a period of years the Red Cross has demonstrated the value of the services of a nutritionist, which has made her position assured in health, welfare and educational agencies. Industry opens another comparatively untouched field in which to demonstrate her worth.

NUTRITION AT WORK IN THE HOSPITAL

IRENE WATERS WEST[1]

The dietitian in the hospital has an exceptional opportunity to teach the public. The patient is not always going to be a patient. He is going home some day where again he will be a member of the family. What the dietitian teaches him in the hospital he will remember, for it is linked up in his mind with his instructions from the doctor. If she explains why he should drink milk, for example, and encourages him to drink it, he is likely to go home and spread the gospel to his family. Here we have a great opportunity to be of real service to the patient and the public. Yet many dietitians are leaving hospital positions to enter what is termed public health or community work, believing that their knowledge can thus more effectively be applied. Why?

It has always been taken for granted that the hospital dietitian would teach the patient who is on a special diet, so that he might follow it at home and perhaps be given an appointment to return to the food clinic for a follow-up. But what of the patient on a normal diet? Must he get his instruction, after he goes home, from the newspapers and the radio or uncertain bits of information which he happens to pick up? Why not teach him as we do the diabetic? If we do not, we are missing an excellent chance to influence a whole family.

At Presbyterian Hospital we have prepared a folder of nutrition information which is given to the patient who is going home on a normal diet. A few days before he leaves, the folder is placed on his tray. The dietitian visits him to discuss any difficulties which perplex the patient. Classes in nutrition for the ambulatory patient who is to be discharged on a normal diet, are held in a centrally located place accessible to all patients. By means of these and the folder we believe we are accomplishing some good missionary work.

In the outpatient department of the hospital there are many opportunities to teach normal nutrition. For instance, the Mothers' Club for the antepartum patients presents an excellent opportunity. Now that pregnancy has reached practically the proportions of a national epidemic, here is a place to get down to the fundamentals of "making America strong by making strong Americans." The principles of good nutrition and good health habits can be stressed also in classes in breast feeding. A budget class offers a chance to teach good nutrition at low cost, taking into consideration ration point values and prevailing shortages.

Still another opportunity is found in the formula class. In too many formula classes the time is devoted exclusively to sterile technique and boiling bottles. But the infant is going to eat long after he has outgrown bottles. Furthermore he is going to imitate his mother and father, so it will be to the child's advantage if the mother and father adopt good eating habits. If we can help the parents to acquire a proper attitude toward feeding their child when he is ten days old, and make them understand that as he grows older his correct diet and eating habits will depend on their own correct diet and eating habits, we shall have won a major victory.

Must the dietitian in the hospital confine all her teaching to patients? Why teach nutrition to patients and outsiders and overlook our own personnel? One should not assume that just because they are connected with a hospital they know all about nutrition. If a factory finds it pays to teach nutrition to its employees, why not the hospital? The assistant superintendent of Vanderbilt Clinic asked the dietitians to give a series of nutrition classes to the secretaries in the clinic because of the number of absences for sickness in her department. We did not try to follow the Red Cross course outline because these secretaries are mostly young and unmarried. Our approach was that one is better able to keep up with social as well as business life if properly fed.

Another course, expressly for social workers, was planned to aid them with their patients. Normal nutrition was stressed first and then the suitable modifications for each type of special diet. We showed how a patient on a special diet could eat the same food as other members of the family with only slight modifications. Emphasis, of course, was placed on low-cost foods.

Classes have also been held for the dining room waitresses. As with the other groups, they were first instructed in the normal diet so that they might be able to influence those they served to select the proper food. We also taught them how to obtain a low-calorie or high-calorie diet from the regular staff menu, so that they would be better able to help those who wished to gain or lose a little weight.

A four-class course was given to pantry maids in the evening when they were off duty. Attendance was voluntary but almost all the maids attended every class. In these classes we tried to compete with the advertisements in the movie magazines and emphasized good food as an aid to glamour. We made it clear that we were teaching because we were interested in their welfare and not for the sole purpose of making them more efficient on duty.

A course was also given in connection with the New York City Nutrition Committee to women of the neighborhood who were members of the Food Squad Reserves. The program included the regular six-class nutrition course given by one of our dietitians at the Health Center, followed by hospital in-service training in which the class was taught the use of large kitchen equipment and the preparation of stews, soups, sandwiches, and beverages in large quantities. These women give forty hours' service

[1] Vanderbilt Clinic, Presbyterian Hospital, New York.

a year to the hospital and are on call should an emergency arise.

Outside the hospital dietitians are constantly in demand to teach nutrition classes in the Health Centers in their time off duty. In fact, the teaching dietitians at Presbyterian Hospital had to train the student dietitians to conduct some of these, for the demand grew to be more than they could meet. No demonstrations were given, for the hospital dietitian is not trained to do this and equipment is often poor or inadequate. We found, too, that an intelligent housewife could be trained to demonstrate where it seemed advisable. These classes were attended by persons from all levels of society.

From our point of view the idea that the dietitian in the hospital is concerned only with sick patients and has nothing to do with normal nutrition is old-fashioned. Her opportunity to teach normal nutrition is as great as that of any other nutrition worker.

PUBLIC HEALTH NUTRITION—A SUMMARY

HELEN STACEY[1]

What part are nutritionists playing in public health work today? Today this work has as its objectives not only the protection of individuals and groups against disease but also the promotion of individual and group health. Responsibility for furthering such a program rests with a goodly company of public health workers—physicians, dentists, nurses, sanitarians, statisticians, and nutritionists. The size of this professional group is indicated by the returns from a questionnaire that was sent by the United States Public Health Service in January 1942 to more than 1000 full-time state, city, and county health departments and a number of voluntary health agencies. These agencies reported that present personnel in official agencies alone numbered approximately 17,000 with an additional 7000 vacancies or new positions. Considering the number of public health personnel as a whole, the nutritionists are a comparatively small group. This same report states that approximately 100 nutritionists are employed by these same official agencies with about 150 vacancies or new positions open at the present time.

There is considerable confusion over the terms "nutritionist," "home economist," and "dietitian," but it is hardly necessary for me to discuss the respective functions of these, when the American Dietetic Association and the American Home Economics Association have so recently defined them. Needless to say, home economics teachers and home economists affiliated with private and public welfare agencies, with commercial organizations, and with such agencies as the Farm Security Administration and the Extension Service of the U. S. Department of Agriculture as well as dietitians in hospitals and institutions are making and will continue to make a tremendous contribution to the sum total of public health nutrition work in this country. This discussion, however, will be limited to those workers associated with private and public health agencies whose primary function is in the field of public health nutrition. I shall review briefly the number of workers so employed, the types of agencies employing them, and what they are doing.

How many nutritionists are active in the field of public health today? According to rough estimates based on information secured through unofficial channels more than 200 nutritionists are employed full time by these public and private health agencies. The variety of agencies employing these workers indicates the wide diversification of their activities. We find nutritionists serving as consultants on the staffs of state, county, and city health departments. Visiting nurse associations are utilizing the services of these workers. Additional agencies and organizations employing nutritionists include boards of education, private health agencies, such as tuberculosis associations and health councils, private social agencies and councils of social agencies. One illustration of the increasing number of personnel employed in this field and the volume of work in public health nutrition being undertaken throughout the country is the growth in number and amount of such services in state health departments. In 1936 only three state health departments were employing nutritionists. Today 44 states and territories have over 100 such workers on their staffs and several other states have made plans to employ nutritionists.

What are the duties of public health nutritionists? Their primary function is to strengthen the nutrition aspects of the service already being given by all public health workers. They try to help other workers to appreciate not only the importance of the nutritional status of all individuals whom they reach, but also the need of integrating sound information on nutrition with whatever treatment or educational service they offer.

Within her own agency the public health nutritionist is usually responsible for the nutrition phases of all programs for in-service education. Individual and group conferences are held with such professional workers as physicians, public health nurses, dentists, dental hygienists, and social workers. The nutritionist usually is responsible for the preparation of teaching materials, such as charts, posters, and pamphlets for both the professional staff and for those whom the agency serves. She may make some home visits to become familiar with the type of problems existing there, or to observe the teaching done by the nurse, or to demonstrate to physicians and nurses how to present nutrition information simply and effectively.

If the agency is engaged in a school health program, the nutritionist may serve as consultant to the school authorities on nutrition phases of the school health curriculum or assist them in planning a school

[1] Children's Bureau, U. S. Department of Labor, Washington.

lunch program. If no other trained worker is available, she may act as a consultant to administrators or board members of institutions responsible for the nutritional well-being of groups. In many instances, she cooperates with colleges and universities in arranging for observation or supervised field experience in public health nutrition for both undergraduate and graduate students. These are only a few of the services offered by a public health nutritionist.

The variety or scope of the nutritionist's services is influenced by such factors as the type of agency with which she is connected, its basic policies and philosophy, the type of group to be reached, the kind and number of workers on the agency staff, and the extent of the area served.

What kind of person is this public health nutritionist? What is her training, the extent and nature of her experience? As I mentioned earlier, desirable minimum qualifications for public health nutritionists, occupying positions of varying degrees of responsibility, have been set up and approved by the American Dietetic Association and the American Home Economics Association. Without exception, she has a bachelor's degree in home economics with a major in food and nutrition, or a bachelor's degree in other subjects such as chemistry, biology, or education with additional courses in foods, nutrition, and allied subjects equivalent to the requirements for a major in those fields leading toward a bachelor's degree in home economics. If she is working in a large agency or in an official state agency, she is expected to have completed at least one-half year, preferably a whole year, of graduate work. It is usually expected that these workers will have had field work in community nutrition at either the graduate or undergraduate level in a health or welfare agency under the supervision of a qualified nutritionist.

True, these qualifications are high. In the light of the demands of such varying types of service, however, it is important that the nutritionist be competent to cope with the problems presented. It has been impossible to secure information on the training and experience of the entire group of workers active in this field today. Whether or not fairly complete records on 87 workers give a representative picture of the entire group is open to question. It might be of passing interest, however, to note that out of a total of 87 nutritionists affiliated with state health agencies, 35 have a master's degree. In addition, 42 have had some graduate work, exclusive of a course in hospital dietetics or in a food clinic, thus making a total of 77 out of a possible 87 who have had some work beyond that leading to a bachelor's degree. Even though the records are not entirely complete, at least 60 of these 87 workers have had experience in community programs prior to their employment by health agencies.

The services of a well-trained nutritionist should be available to every public and private health agency if a complete public health program is to be made available to a community. What can dietitians do to promote such a program? We members of this Association can use our influence in helping agencies in our own community to appreciate the value of services in nutrition, we can help maintain the standards set up by our own and other professional associations for nutritionists, and we can cooperate with all workers in the field of public health in order that the program of public health nutrition may represent a coordinated community effort.

THE DIETITIAN IN A SMALL ARMY HOSPITAL[1]

LIEUT. RICHARD T. VIGUERS[2]

Unqestionably, with the exception of the American Dietetic Association, I think it can be safely stated that no organization has placed so much emphasis upon food generally and adequate and balanced diets in particular, as the Army. It is a very obvious but nevertheless fundamental fact, that if men do not eat they cannot fight and that an adequate and balanced diet is necessary to maintain the efficiency and morale of the fighting forces. In this tremendous task the Army has called upon dietitians to contribute their particular knowledge and experience and to work with the food experts in the Quartermaster Corps, the Medical Corps and the nutritionists in the Sanitary Corps. Under present circumstances it has been felt that the dietitians can make their greatest contribution in Army hospitals and it is with this group that we are concerned in this discussion.

Dietitians in the Army come from all types of hospitals, but to my mind an ideal staff would consist of at least one dietitian who had been trained at Walter Reed Hospital in Washington, under Miss Helen C. Burns; at least one dietitian who had experience in Public Health Service hospitals; and the others from approved civilian hospitals.

In order to show the place of the dietitian in a small station hospital, I should like to outline briefly the general organization of the mess in a station hospital. The commanding officer of the hospital is responsible for the hospital mess, just as he is responsible for the other activities of the hospital. He usually appoints an officer to have immediate charge of the mess, who is known as the mess officer or the director of dietetics. This officer then becomes responsible to the commanding officer for the administration and function of all the messes in the hospital. The mess officer is also the custodian of the hospital fund and as such he collects all the subsistence charges and pays for all the food used in the mess. He also must account for this

[1] Presented before the American Dietetic Association, Detroit, October 20, 1942.

[2] Medical Administrative Corps, Army of the United States. Mess Officer, Station Hospital, Fort Jay, New York.

fund which, even in a small hospital, involves $15,000 to $20,000 a month.

Under the mess officer is a mess sergeant who has many administrative duties assigned to him and who is generally responsible for all the details of food supply. There is also a noncommissioned officer in charge of the office where the financial, inventory, and various other records are kept. To another noncommissioned officer is delegated the responsibility for the store-room and the issuance of food supplies to the various kitchens. Each mess hall is in charge of a noncommissioned officer and there is the usual staff of cooks, assistant cooks, vegetable men, dishwashers, and mess attendants.

Into this organization the dietitian comes in a technical and supervisory capacity. She is responsible for those duties assigned to her by the commanding officer of the hospital through the mess officer. Obviously, the duties to which she may be assigned will vary according to the particular situation, the wishes of the commanding officer of the hospital and the ability of the dietitian. Therefore, I cannot describe the exact nature of the work of a dietitian in all Army hospitals but I can describe her duties and responsibilities in one Army station hospital.

In general, the duties of a dietitian in an Army hospital differ from those in the average civilian hospital in that in an Army hospital her responsibilities are primarily technical and professional rather than administrative in the strictest sense of the term. Of course, there are no hard and fast dividing lines between administrative and professional duties. In many instances the administrative ability of the dietitian is effectively utilized in the mess department. For example, she may have had more experience in formulating work schedules than anyone else in the department and would therefore be asked to assist in this work.

As described in a circular letter from the Surgeon General, "In general . . . [the Dietitian] should be made responsible for the planning of balanced menus, bearing in mind the value of the ration, supervise the preparation and service of all meals to both tray and dining room patients, keep a close inspection of waste, direct employees in matters pertaining to the preparation, serving and storage of food, assist in the ordering of food supplies and procurement of kitchen equipment, and give instruction in and demonstrate the preparation of special diets to patients when ordered by the doctor in charge. . . . The dietitian does not serve under a mess sergeant." However, it is very important that the dietitian and the mess sergeant work smoothly together, each recognizing that the other has definite duties and responsibilities and different training and experience.

In order to show more clearly just what the dietitians do in one hospital, let me describe their specific duties. We have a staff of three dietitians—one head dietitian and two staff dietitians. The head dietitian is responsible for the organizing, assigning and supervising of the work of the other dietitians. The head dietitian writes the house menus, that is, the regular diets served to patients and officers, and the menu served to the enlisted men in the medical detachment. The head dietitian checks all messes for standardization of food preparation, checks use of leftovers and the amount and condition of perishables in the refrigerators. She also prepares recipes for new dishes ordered on the menu. In addition the head dietitian usually assumes the responsibility for the general supervision of the preparation of food in the main kitchen where food for ambulatory patients and officers on duty in the hospital is prepared.

Another dietitian is assigned to a cantonment kitchen where the food is prepared for certain cantonment wards. She is also responsible for the service of food in five of these wards. Of course, this responsibility for the wards does not involve actually serving food in five wards, but it does include the supervision of the serving kitchens, the demonstration and training in the serving of trays, and making rounds to see that the patients are satisfied with the food and to work out any special diets as far as possible in terms of the patient's likes and dislikes.

The third dietitian on the staff writes the special diets and is assigned to the diet kitchen. It so happens that all the employees in the special diet kitchen are civilians and so the dietitian assigned to this kitchen has full administrative responsibility. This dietitian supervises the serving of food in five hospital wards, makes rounds on the wards of officer patients to distribute and discuss selective menus and visits other wards to check on the adequacy of the food and whether it is satisfactory to the patients.

In some hospitals one of the dietitians is assigned to make rounds with the medical service but this practice has not been followed in our hospital. The usual special diets are ordered directly by the ward officer and when any special problems arise they are settled in a conference between the ward medical officer and the head dietitian or the dietitian responsible for that ward.

There are numerous other jobs which dietitians do in Army hospitals just as in any other hospital. They make the usual periodic breakdowns of the house diet into food elements, assist in cost studies to determine the most economical way of buying and preparing certain foods, and perhaps most important of all her miscellaneous duties, the dietitian in her many contacts with the patients helps to keep them satisfied.

There is no doubt that dietitians are filling a vital need in Army hospitals and that they are key persons in the mess department. Their special training and experience is beginning to be fully utilized not only in feeding sick and convalescent patients but also in meeting the food needs of the officers and enlisted

men on duty at the hospital. As the war continues we can reasonably expect more shortages of certain foods and equipment, as well as shortages of adequately trained personnel. This will mean new and more difficult problems, but I am sure that dietitians will meet and solve these as they have others in the past—cheerfully and efficiently.

The material in this paper was based in part on the following references: *Mess Management and Training*, TM 10–205, July 6, 1942; *Dietetic Service in Army Hospitals*, Circ. Letter No. 7, S.G.O., February 8, 1941; *Fixed Hospitals of the Medical Department*, TM 8–260, July 16, 1941; *Military Medical Manual*, Fourth edition, Military Service Publishing Co., Harrisburg, Pennsylvania; and New York *Times*, October 8, 1942.

THE DIETITIAN IN A LARGE ARMY HOSPITAL[1]

MAJOR WALLACE M. JOHNSON[2]

Dietitians are in a position to render a very definite service in the preparation and serving of food in the Army hospital units to which they are assigned for service within the continental limits or overseas. These military hospital messes, like all military organizations, have been functioning according to a definite set of rules for years. This somewhat restricts the dietitian who may wish to work out what she believes to be more acceptable methods of procedure. Standardized Army methods, however, are a distinct advantage to the Army for only thus is it possible to transfer mess personnel, whether military or civilian, from one unit to another without disrupting the service of the mess due to conflict of authority or differences in methods used. It should be evident, therefore, that a sharply defined and well-organized system must be set up and adhered to by every unit in the common interest of economy, discipline and order.

The dietitian entering the service should realize that in the past the type of responsibility which she would ordinarily expect to carry, to a large extent has been assigned to the mess sergeant. Since the mess sergeant is an integral part of every Army mess, she will perforce have to serve in a sense under his direction. For many years the Army has fed its soldiers, both the sick and the well, without the services of a dietitian and where dietitians are not available this is still being done. In reality, the dietitian, unlike the mess sergeant, has still to prove her indispensability, for if no dietitians were available in an Army hospital the mess would still function. It cannot be denied, however, that the feminine touch in the preparation and food service of any organization not only enhances the aesthetic value of the food but adds materially to its palatability. We all realize that the dietary of even a well person is guided by more than the dictates of hunger.

To the Army hospitals come hundreds of soldier-patients for treatment and care. Equally important with other measures in the proper therapeutic program of these patients is the part played by the dietetic department. The extreme importance of the mess and its essential relationship to the command is recognized by higher authority to the extent that every possible cooperation and aid is provided. During World War I, through the splendid efforts of Brig. Gen. J. R. Kean, M.C., dietitians were assigned to our military hospitals for the first time.

This addition to the staffs of the larger Army hospitals was indeed a remarkable step forward, and it has paid excellent dividends. Dietitians in Army hospitals can give the soldier-patients the full benefit of scientifically constructed diets that are both pleasing to the eye and appetizing to the palate. This is of the utmost importance in the therapeutic program of the patient. In my opinion more cures are effected by the proper feeding of patients than by the administration of pills. It is essential that the Army medical officer realize the importance of this and cooperate with the dietitian and the Army nurse in their efforts toward making diet therapy fully effective in the therapeutic armamentarium.

The dietitian, trained as she is in the science and art of dietetics, can be an important cog in the wheels that keep the Army hospital rolling. As highly trained technician-specialists in the art of food preparation and food service, dietitians are comparable to pharmacists in the services they render to the medical profession.

The dietitian who enters Army service must realize the necessity of conforming to Army customs and regulations in all of her activities, whether on duty or off duty. The transition from the civilian hospital to that of the Army may be disconcerting to some extent unless she is fully aware of conditions. In civilian life she is the executive of the dietary department, responsible only to the head of her hospital. She carries the full responsibility of the entire department constantly. In the Army she enters an entirely different set-up. Of course she must know how to do her job and do it well, but it is fully as important that she cooperate cheerfully and willingly with every unit in the hospital, individually and collectively, from the Commanding Officer to the kitchen police. Her success, in other words, depends mainly on her ability to adjust herself to becoming only a small part, even if a very vital part, of an efficient, smooth-running machine, the Army of the United States. Once in the Army the dietitian will find that most of the responsibilities of food requisitioning, supervision of the preparation of regular diets, and supervision of the kitchen personnel

[1] Presented before the American Dietetic Association, Detroit, October 20, 1942. The ideas contained herein are those of the author and do not reflect, necessarily, the opinions or policy of the War Department.

[2] Medical Corps, Army of the United States. Director of Dietetics, Station Hospital, Fort Benning, Georgia.

is shouldered by the mess sergeant who, it cannot be denied, is the mainspring of the department. He accomplishes his work through adherence to the Army system in which he may have been schooled for years. Obviously, only by exercising tact and cheerful cooperation can the dietitian aid in promoting a smooth-running and efficient kitchen.

It is essential, too, for the dietitian to remember that in the Army the "three squares a day" type of menu is most likely to be appreciated by officers and enlisted men alike. Not that the niceties of food service and special food arrangements are taboo, but that menus adequate in nutritional values should be provided without dressing them up to the point where architectural achievement (appearance) is unduly stressed. Variety should be the aim, since patients often have little else to occupy their minds. It is extremely necessary, too, that the dietitian realize the importance of keeping within the ration allowance, for the Army mess has a budget to which it must strictly conform. In this matter the mess sergeant will be most helpful, for generally his judgment as to the advisability of buying this or that food item is sound.

The dietetic department of a large Army hospital is made up of officers, enlisted men and civilians. There are usually several mess sergeants whose head is the chief mess sergeant or steward. Under this key group are the cooks, clerks and kitchen police. Usually there are several dietitians assigned to the department. In order to give you the status of the dietitian as expressed by the War Department, I wish to quote in part the contents of Circular Letter No. 7 of February 8, 1941, issued by the Surgeon General of the Army of the United States. [It should be noted here that this antedates the enactment of the Edmiston Bill which grants military status to dietitians. Ed.] I quote:

> Dietitians are civilian employees of the Medical Department and are given two grades (1) Dietitian and (2) Head Dietitian. Head Dietitians are utilized in departments having three or more dietitians. There is also a Chief Dietitian at Walter Reed General Hospital, Washington, D. C., who is supervisor of the training course for hospital dietitians conducted at that hospital. All appointments are made in the lowest grade. Promotions are made by the Surgeon General of the United States Army on recommendation of the Commanding Officer of the hospital. Dietitians are responsible for the certain duties assigned to them by the Commanding Officer of the hospital, through the Mess Officer. In general she should be responsible for the planning of balanced menus, bearing in mind the value of the ration, supervise the preparation and service of all meals to both tray and dining room or cafeteria patients, keep a close inspection of waste, direct the employees in matters pertaining to preparation, serving and storage of foods, assisting in the ordering of food supplies and the procurement of kitchen equipment, and give instructions in and demonstrate the preparation of special diets to patients when such diets are ordered by the doctor in charge. When patients are permitted to select their diets, the dietitian should be required to check their choices in order that the ward surgeon can be assured that the patient is ordering an adequate diet. If inadequate diets are ordered then the dietitian should make suggestions for improvement. Dietitians should keep in constant touch with the mess service of the Hospital and offer suggestions to the Mess Officer when changes for improvement are indicated.
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> The Dietitian's duties are closely allied to those of the Mess Sergeant who is charged with the duties of providing and arranging all details of food supply in an organization under the supervision of the Mess Officer. Ordinarily, he is an experienced general cook and in addition possesses the ability to supervise and control all the details and keep accounts of organization mess. He also has a fair knowledge of food values and is capable of preparing menus to provide the necessary variety in diet. In the performance of his duties he must have the ability to handle men, knowledge of simple figures and ability to purchase supplies in quantity, some knowledge of records and a thorough knowledge of the importance of cleanliness, sanitation and food conservation. Therefore, while the Dietitian will not serve under the Mess Sergeant, she will, when the duties overlap, be required to give such assistance as is necessary.

In the educational plan for the soldier-patient the dietitian has another definite place in the Army hospital. The Army, composed as it is today of men from all walks of life and from every section of the country, brings together a variety of persons with different social backgrounds and accordingly different experiences in the matter of food. Food habits, good or bad, family customs, and sectional food practices often are the basis of the acute problems of the soldier-patient surrounded by routine and procedures quite foreign to those previously experienced. The combination of strange environment, homesickness and unaccustomed types of food, together with certain other factors of psychological import, may produce gastric upsets and feeding problems that will seriously affect the well-being of the patient. I have seen these feeding problems and sometimes the stubborn dietary perplexities of the soldier-patient vanish under the tutelage of a tactful, well-trained dietitian with a pleasing personality, whose intelligent understanding of the situation enables her to apply the proper dietary and psychological methods of treatment. The cheerful and skilful dietitian who makes ward rounds consistently to the end that the food service and the food itself are satisfactory, who corrects small errors and records individual peculiarities as these apply in the care of the patient, creates good-will among the patients, boosts their morale, and hastens their recovery. Patients who require special diets are very appreciative of the service rendered by the dietitian, which includes instruction concerning their diets.

More dietitians should be trained for the Army. Ways and means to accomplish this should be given serious consideration. The dietetic profession, like many other related professions, has numbers of highly trained individuals who can and will give the armed forces the benefit of their training. It is to be hoped that in the immediate future such training will include adequate attention to Army procedures. If so, some of the complications and uncertainties

encountered in the transition to Army life could be avoided.

It appears that the place of the dietitian in the large Army hospital in time of peace or war is definitely established. It is through the efforts of those interested in the progress and achievement of dietetic service in and out of the Army, and because of the desire of the organized members of this profession to keep the standards of education, training and ideals high and unblemished, that the opportunity to be of far-reaching influence and to demonstrate the sterling quality of her service now awaits the Army dietitian.

Nutrition and the War

WHO TOOK ALL THE BUTTER?

T. SWANN HARDING[1]

It wasn't long ago that we were living off the fat of the land. But that was before December 7, 1941. In those days butter was neatly arranged in the grocer's refrigerator in innumerable pound packages and we bought all we wanted. Today grocers grudgingly release quarter or half-pounds of butter to a customer. Who took all the butter? Where did it go?

It went primarily to ourselves.

Our total milk production in 1942 was the greatest on record. But our production of whole milk powder, of cheese, and of evaporated milk increased enormously in 1942 over 1941. Our demands for fluid milk mounted steadily. All this meant that less milk could go to butter manufacture, yet people were so eager to buy butter that the supply proved unequal to the demand.

In what we merrily call "normal times" Americans consume about 16 pounds of butter per capita a year. Soldiers, however, consume about 40 pounds. Their per capita consumption is high largely because they are all adults. Hence the Army, *our* Army, was a major factor affecting the civilian butter supply. In 1942 it alone purchased more than a hundred million pounds of butter.

We also shipped some butter on Lend-Lease, but not much. About 0.7 per cent of our total production went to Russia, which was so hard up for fats that it gave butter a priority equal to that of planes, tanks and guns. We did not send a pound of butter to England under Lend-Lease because she derives her wartime imports from Australia, New Zealand, and Argentina.

The fact is that our civilian population with its very considerably increased income bid against the Army for our butter supplies, and a shortage became inevitable. Under a Conservation Order issued November 20, 1942, half of the butter in cold-storage warehouses in 35 principal centers, or roughly 40 per cent of the total stocks in cold storage, was set aside for government use. A further order, effective November 25, 1942, prohibited the delivery of whip ping cream to others than producers.

Further to encourage butter production another order restricted commercial ice-cream manufacturing to only 65 per cent of the dairy products used a year previously. Nevertheless stocks and production of butter continued to fall. Whereas, on May 1, 1942, butter stocks were 70 per cent above a year before, they had dropped to 54 per cent below on November 1, and on December 1, 1942, were the second smallest on record. Had the freeze order not been issued stocks would have reached zero on or before the end of 1942.

During 1943 all butter-makers who produced more than 12,000 pounds in any month during 1942 must set aside 30 per cent of their monthly production for designated government agencies. Two-thirds of that butter will go to the Army, but that will mean only about one and a third ounces butter per soldier per day. Most of this will be fresh butter; some will be canned. It is planned to hold civilian consumption at about 13 pounds per capita per year.

Russian soldiers now get about two ounces of fats per man per day, very little of which is butter. We shall do better than that. But our civilian consumption of fats and oils must be reduced to about the level of 1935–39, or a little below. This implies rationing, without which we should undoubtedly try to consume a great deal more than is available for us. In returning to the 1935–39 level of consumption we shall have a little less butter and margarine and a little more lard and other shortening and fats from manufactured foods than we had in those years.

We normally produce a large part of the fats and oils we use industrially and for food. But we also import large quantities from the Far East, imports that ended when Japan struck. Our commitments to the armed forces and our allies increased at the same time that civilian demand had gone up tremendously as a result of enhanced buying power. In 1942 we produced 20 per cent more fats and oils domestically than we did in 1941. This was largely in response to the Department of Agriculture's Food For Freedom Program which led to greatly increased production of soy beans, peanuts, linseed, and cottonseed for making oil.

In September 1942 the War Production Board issued an order limiting manufacturers' use of fats and oils in order to conserve supplies and build reserves. Price control had been instituted in December 1941, though ceiling prices were revised upward several times during 1942. The prices of practically all fats and oils are now covered by specific ceiling orders.

[1] Office of Information, U. S. Department of Agriculture. This article is a statement of personal opinion, not an official pronouncement of the Department.

The soy bean goal for 1943 is higher than that for 1942, though this represents only 90 per cent of the acres actually harvested last year when the goal was tremendously exceeded. The 1942 peanut goal was not attained, however, and that for 1943 is 48 per cent above the acres harvested last year. The hog-slaughter goal is up 25 per cent.

The 1942 milk goal was not attained. The Department of Agriculture hopes to get 122 billion pounds in 1943, whereas really to satisfy all our needs 140 billion pounds at least would be required. Even if the bans on whipping cream and on 35 per cent of the ice cream yield 4 to 5 billion pounds of milk-equivalent, we shall be short of butterfat for civilians.

In short, the figures on probable production and consumption present the following picture: In 1943 we should produce 11.7 billion pounds of fats and oils domestically, as compared with 10.1 billion pounds last year. We shall probably import 0.8 billion pounds. We had in factories and warehouses some 2 billion pounds on January 1, 1943, making a grand total for the year of 14.5 billion pounds.

During 1943, military use, Lend-Lease and commercial exports and shipments to our own territorial possessions will probably absorb 2.6 billion pounds of these fats and oils. Civilian nonfood use will run about 3.2 billion pounds and, including butter and lard, civilians will use about 6 billion pounds for food. If we allow year-end reserves of something like 2.7 billion pounds this again adds up to 14.5 billion pounds and the budget appears to balance.

But civilian requirements will probably exceed estimates, if unrestricted, while the government's contingency reserve of 0.7 billion pounds, included in the above reserve of 2.7 billion, is insufficient. It should be at least 1.5 billion pounds. To achieve that consumer rationing of fats and oils must be instituted.

In 1942 we ourselves took the butter, we civilians and our armed forces, and nobody else. In 1943 we must depend upon rationing to ensure an equitable distribution of our reduced supplies of fats.

Our butter supply on February 1, 1943, was 15,600,000 pounds, the lowest since 1924. A year previously it had been 83,100,000 pounds. Make your own comparisons and judge for yourselves what 1943 holds for us. Remember also that if civilians get but 13 pounds of butter each this year, they had only 13.8 pounds in 1918. There was a war on then, too.

HOW TO MAKE LANTERN SLIDES

How cellophane lantern slides for use in teaching students and lay groups can be simply and inexpensively made was described by Mrs. Alice H. Smith, Cleveland Health Council, at the Detroit meeting of the American Dietetic Association. The purpose of the slides she described, is to illustrate the retention of food values in relation to food storage and preparation. For example, an opened can of grapefruit juice would be illustrated by shading the exposed contents of the can a light yellow on one slide; in the next slide only one-half of this would be shaded yellow, thus indicating to the audience a 50 per cent loss of the vitamin C in the juice when placed in the refrigerator uncovered for one week. Likewise, the effect of soda in cooking, losses during storage or in water during cooking, etc., can be illustrated by representing the original food value of the constituent in solid color in the first slide and the amount of the constituent lost, by means of an uncolored section in the second slide. As new figures are released in the literature, new cellophane slides can be made to tell the story.

Complete directions for making the lantern slides on cellophane, as prepared by Miriam Schrader and Jean Miller, students of Mrs. Smith, follow:

Equipment needed includes cellophane (the less inflammable kind), white paper, India ink, pen holder and fine point, set of photo-tints (tablet of dye paper, available at camera supply shops), slide glasses, passe-partout.

Cut white paper and cellophane into pieces the size of the slides (standard size is $3\frac{1}{4}'' \times 4''$).

Sketch picture and lettering on white paper, leaving a one-half inch margin on all four sides.

Fasten cellophane to sketch with paper clips and trace with India ink and a fine pen-point.

Apply color on opposite side from that on which the ink was used. Don't use too much water, since this causes the cellophane to blister and dilutes the color too much. Passing a wet brush over the dye paper is the best technique when concentrated colors are desired, soaking torn pieces of dye paper in a few drops of water is best for paler effects.

After paint is thoroughly dry, press cellophane slides between pages of a thick book.

Prepare for use in either of the following ways: put between slide glasses and bind four edges with passe-partout (most expensive but most permanent way); or have several pairs of slide glass hinged on one edge with passe-partout, and slip cellophane slides in and out as needed.

One illustration which Mrs. Smith used to show how effective the lantern slides can be in teaching good cooking practices was a set of two slides on each of which a dish of peas was pictured. In the first, all of the peas were colored green and the legend, lettered on the cellophane, read: "Peas simmered 12 minutes. Good source of thiamin." On the second slide, only two-thirds of the peas were colored green and the inscription explained as follows: "Peas simmered 12 minutes with soda. One-third of thiamin lost." Losses in cooked spinach and stored apples were likewise illustrated and described as follows: "Cooked, liquid discarded, about one-half ascorbic acid lost." "Cooked, liquid retained, only 14 per cent lost." "After 6 months' storage, two-thirds of ascorbic acid content lost."

Book Reviews

Essentials of Nutrition. By Henry C. Sherman and Caroline Sherman Lanford, Columbia University. Second edition. New York: The Macmillan Company, 1943. Cloth. Illustrated. Pp. 442. Price $3.50.

A new edition of any of Dr. Sherman's books is always eagerly awaited by dietitians. This, co-authored by his daughter, Caroline Sherman Lanford, is intended as a more or less elementary text presenting an up-to-date view of the essentials of nutrition. It is perhaps unnecessary to add that unlike many other books with a similar aim, the content of this can be unquestionably accepted as sound. Even though it is written for the beginner in the science of nutrition and dietetics, it can be read with profit by dietitians and nutritionists who wish to be up to date on the proper emphases with which to present a given phase of the subject of nutrition. As a sufficiently inclusive reference, too, it meets the need as a source of simple definitions and concise summations of specific subjects.

The most recent advances in nutritional knowledge have been incorporated in the present edition, particularly with reference to newly found factors essential to human nutrition and other modifications necessitated by the National Nutrition Program. Quantitative estimates of need have been revised in accordance, of course, with what Dr. Sherman calls "the new yardstick of good nutrition."

Meals for Many. Bulletin 477. By Katharine W. Harris and Marion A. Wood. Ithaca: New York State College of Agriculture, 1942. Paper. Illustrated. Pp. 302. Price 30 cents.

This bulletin, prepared to "help inexperienced persons to prepare and serve, successfully and efficiently, food in quantity," admirably fulfils its purpose. Seldom do we see material so well organized and so complete in presentation as is found in this inexpensive, timely publication.

Along with interesting menus, the authors present menu patterns for various occasions, with the raw costs of all food stated. The need for, and methods of obtaining uniform servings are emphasized; amounts to purchase are clearly tabulated with explanatory notes appended which attest the authors' ability as experienced operators; and methods of figuring food costs are clearly set forth, while the average serving costs of many menu items are specified.

Sanitation, dishwashing, record-keeping, equipment, organization of work, and meal service are adequately presented. All excellent, the recipes include yields, size of servings, and approximate costs per serving, and the cooking instructions are clear and concise. The bulletin includes a complete index.

Those managing school lunchrooms, industrial food service units, college and university groups, community meals, and many other types of large quantity services will find this bulletin very useful. At this time when we need canteen services and may need to expand further our group-feeding efforts, this material is especially welcome. The evidence is clear that the authors are excellent teachers as well as experienced administrators. College classes in quantity cookery and in institution management, and vocational classes in the food trades can use *Meals for Many* as a reliable manual.—Anna M. Tracy, *Florida State College for Women, Tallahassee.*

The Cook's Recipe Manual. By E. Middleton, B.A., Member of the Home Economics Department, Central Technical School, Toronto, In Charge of Classes for Army Cooks; M. Ranson, B.A., Superintendent of the Great Hall, Hart House, University of Toronto; and Albert Vierin, Chef of the Georgian Room, The T. Eaton Company, Ltd., Toronto. Toronto: The Ryerson Press, 1943. Paper. Pp. 225. Price $2.

Dietitians will be interested in this new manual containing 300 standard recipes based on 100 servings. The procedure is arranged in numbered step sequence and the amounts of the ingredients are stated in both measure and weight. The total yield and portion sizes are given. Circla-bound, the pages lie flat for convenience and a heavy coated paper is used. There is a preponderance of the "hearty" type of dish, making the book well suited for use in Army, Navy and Air Force camps and munition plants. Further, the recipes call for foods ordinarily provided in the Army rations. In addition to the recipes, general directions for preparing specific types of foods are included, also meat charts and other helpful culinary information, including a complete index.

Large Quantity Recipes. By Alice M. Burgoin. Minneapolis: Burgess Publishing Company, 1942. Paper. Pp. 102. Price $1.75.

The ninth printing of this book furnishes a collection of some four hundred tested quantity recipes. The majority of these are in terms of from forty to eighty servings, and give the size and approximate cost per serving. Some few recipes do not give this information. A set of "Suggested Menus" gives costs per serving in detail per item at the time the recipes were tested.

The author evidently prepared these recipes for use by experienced cooks. Directions for preparation and cooking are not, in all cases, more than general in nature.

As indicated in the Foreword, the recipes will be of value to school cafeteria and tea-room managers. There is no index, although the recipes are carefully classified.

Recipes for Serving 100. By Sibylla Hadwen, R. N. Minneapolis: Burgess Publishing Company, 1942. Paper. Mimeoprint. Pp. 188. Price $2.

Workers in the field of quantity cookery now expect their recipes to be presented in tabular or "step" form rather than in paragraph form. It is expected, too, that weights will be used for measurements rather than volume (except for liquids) and that yields will be stated in terms of portions of specified size. *Recipes for Serving 100* does not meet these criteria for good form. No statement of recipe cost appears in the collection, nor is it stated where the recipes were tested. In view of the availability of recipes of known reliability, therefore, this publication does not seem warranted.

Dietary of St. Luke's Hospital. New York: St. Luke's Hospital, 113th Street and Amsterdam Avenue, 1942. Paper. Pp. 145. Price $1.25.

This is a very neat and carefully compiled manual, prepared by Mary Ruth Curfman and E. Alliene Mosso, former and present supervising dietitians, respectively, with the advice and guidance of the Committee on Dietary of the Medical Board, St. Luke's Hospital, of which Miss Curfman and Miss Mosso are listed as members.

The arrangement follows a more or less standard plan. That is, requirements for the adequate diet are listed first, followed by a statement of the requirements during pregnancy and lactation. It is emphasized that all special diets are presented as adaptations of the normal. The foods allowed on each diet are stated, followed by sample menus and approximate analyses of the diet. Under rules for "guidance in using the manual," attention is called to the fact that nutritionally inadequate special diets should not be used for long periods of time. Information on infant feeding from birth throughout the first year and on children's diets, both in health and disease, is presented in excellent detail. The usual tables of food values and food classifications, several simple recipes, height-weight tables, forms for use in ordering special diets, a bibliography and an adequate index complete this exceedingly useful handbook.

Vitamin Values of Foods. By Lela E. Booher, Eva R. Hortzler, and Elizabeth M. Hewston. Brooklyn: Chemical Publishing Company, Inc., 1942. Cloth. Pp. 244. Price $2.75.

This compilation, reproduced from U. S. Department of Agriculture Bulletin 638, includes the recorded values, through December 1940, for only the vitamin A, thiamin, ascorbic acid, vitamin D, and riboflavin contents of foods. As the authors state in the Introduction, methods of analyses for several of the recognized vitamins have not as yet been established, and potencies in the case of some of the vitamins cannot be expressed in terms of their absolute weights in foods nor have international standards been adopted for them. The tabulated vitamin values include only those that were determined in terms of absolute weights of the vitamins or directly in terms of International Units.

The vitamin content of foods is stated in relation to variety of plant or breed of animal, method of cultivation or feeding practice, place of production or source of material, method of cooking, processing, storage, variations in degree of maturity, and method of analysis, based on references to published reports which are cited in each case. A full explanation of the method of showing values in the table is given in the Introduction.

Needless to say, the table represents a tremendous amount of work. It is unfortunate that the inferior quality of paper and ink used has resulted in a printing job that is none too clear and makes reading of the figures unnecessarily difficult. Nevertheless, the book will serve as a valuable reference because of its complete coverage of the literature for those vitamins specified above, and for the period mentioned.

Wartime Rationing and Consumption. Economic Intelligence Service, League of Nations. New York: Columbia University Press, 1942. Paper. Pp. 92. Price $1.

This study is an expansion of the chapter on "Consumption and Rationing" contained in the *World Economic Survey, 1939–41*. "Consumption control," states A. Loveday, Economic Intelligence Service, in the Preface, "represents an important aspect of war economy and the present study is concerned mainly with the impact of war controls and rationing on consumption and standards of living in countries for which information is available."

Every type of rationing and the experience of many countries are reviewed in the book and analyzed on the basis of material collected by the Economic Intelligence Service. The study opens with a discussion of the broad problem of consumption control in war economy, the various methods of rationing, and conditions under which they can operate successfully and the connection between rationing and price control. Particular attention is paid to food. Tables are given, showing for some thirty countries, by categories of consumers and groups of foodstuffs, rations prevailing in the spring of 1942 as compared with consumption of the various food items in the "inter-war" period.

This is a scholarly and of course reliable piece of work and is undoubtedly the most accurate general survey of wartime rationing experience of European countries now available.

Psychology in Nursing Practice. By Philip Lawrence Harriman, Ph. D., Bucknell University, Lela L. Greenwood, B.A., R.N., Bellevue Hospital, New York, and Charles E. Skinner, Ph. D., New York University. New York: The Macmillan Company, 1942. Fabrikoid, semi-flexible. Illustrated. Pp. 483. Price $3.25.

This book, which was written for use in the psychology course offered in schools of nursing, contains much that should be of value to dietitians in hospitals or clinics, especially the sections on effects of certain diseases on the personality and behavior of patients, and psychology and the art of nursing. A large part of the book is devoted to the material already covered in psychology courses in college, but the special application of psychological principles to the understanding, treatment, and teaching of people mentally or physically ill is something which the dietitian may not have encountered in any of her college or hospital training. In addition, some attention is given in the book to the nutritional needs of the patient.

The plan of the book follows the suggestions given in *A Curriculum Guide for Schools of Nursing*. References are unusually complete and up to date, and the text matter is well organized, with ample center and side headings.

Feeding in Industry

Dietary surveys, though indicating a high degree of dietary inadequacies in all population groups surveyed, are apt to underestimate the prevalence of poor diets. I wish to emphasize that the vitamin losses of cooked foods are confined almost exclusively to ascorbic acid and thiamin. I have recommended in calculation of diets that the vitamin C value content of cooked foods other than tomatoes should be estimated as zero and that the thiamin content of cooked foods be estimated as 50 per cent of the raw value. These studies by Dr. Goodhart confirm the general applicability of this rule. The only dependable dietary sources of vitamin C are citrus fruits, cooked or raw tomatoes, and fresh raw fruits and vegetables. Three other points made by Dr. Goodhart I wish to emphasize. First, the necessity for industry to employ a dietitian or nutritionist to supervise the cafeterias to insure at least a third and preferably a half of the nutritive essentials in the noon-day meal. Second, that the cafeterias and the serving of food in industrial plants should be on a nonprofit basis or even subsidized by management or government. Third, that the responsibility for adequate meals be placed in the hands of the medical department.—*Abstract of a discussion by Norman Jolliffe, M.D., of a paper by Robert Goodhart, M.D., on Dietary Conditions in Industry: J.A.M.A., 121: 93, 1943.*

Rationing of Meats, Fish, Fats, Oils, and Cheese Begins

Price Administrator Prentiss M. Brown, following receipt of official authorization from Secretary of Agriculture Claude R. Wickard, announced March 12 that OPA will start the rationing of meats, edible fats and oils (including butter), cheese, and canned fish at midnight Sunday, March 28, 1943. Beginning Monday, March 29, the country's housewives will use the red stamps from War Ration Book Two in purchasing their family supplies of the newly rationed foods under the now familiar point system. As directed by Secretary Wickard, the latest rationing program will include: All fresh, frozen, cured, smoked, and canned meats, and meat products derived from beef, veal, lamb, mutton and pork, as well as "variety meats" and sausages; canned fish and canned shellfish; the most important natural and processed cheeses, and most of their derivatives, but not the cottage type and cream cheeses; and most edible fats and oils, including butter, lard, margarine, shortening, salad oils, and cooking oils (excluding mayonnaise and salad dressings).

In the first month, each holder of War Ration Book Two, regardless of age, will have a basic allotment of 16 points a week to spend and family shopping may be done with the books of all members. During the first five weekly periods, red stamps from War Ration Book Two will become valid. The point values, which will be the same for all parts of the country will be stated on a per pound basis with differences in values according to the supply situation and with regard to consumer preferences. Where meat is involved, point values will vary also with the edible meat content of the various cuts and products. All restaurants, hotels, and other "institutional users" will be allotted supplies of the rationed foods on a basis that will reduce their use of these foods to approximately the same level as that of the private individual who eats at home. Similarly, the amounts of the newly rationed foods allotted to industrial users will be under strict control. In fact, every pound of meat, cheese, and all of the rationed items will be sold under the point system, even in the case of sales to the Army, Navy and Lend-Lease. These latter buyers, however, will have point credits to the full extent of their needs in official ration bank accounts and may buy as much as they need on presentation of the correct number of points by means of ration bank checks.

By order of the Secretary of Agriculture, none of the rationed meats may be used in the manufacture of dog foods. The OPA rationing plan makes no provision for pet rations. There will be approximately 150 meat items on the official table of consumer point values, and a separate chart for Kosher stores with about 60 types and cuts. Cheeses, fats and oils, and canned fish will be listed on the meat chart. Changes in point values will be made from time to time, but probably not oftener than once a month, to reflect changes in supply and in consumer demand. As each series of red stamps becomes valid it may be used with complete freedom of choice by a consumer to buy any one of the rationed products.

The new program permits retailers to give "change" in ration stamps (one-point red stamps) where a customer finds it impossible to give the exact amount of red stamps.

Because the preparation of meats by retail butchers involves trimming, waste, and shrinkage, a separate table of "trade" point values will be used which will range up to twenty per cent lower than "consumer" point values. In the case of packaged bacon and certain other meats where there is no waste or shrinkage the values will be identical. Consumers are free to buy wholesale cuts at the "trade" point values. Cuts that have a large amount of bone and fat in general will have values lower than those cuts which are completely edible. Perishability of some parts is also taken into account so that the point values of brains, kidneys, hearts, etc., will be lower.

OPA is providing a so-called "conversion table" as part of the official point list, which converts ounces into points, according to the per pound point value. If the fraction on a single sale is less than half a point, the customer does not pay an additional point. If it is one-half point or more, the retailer collects a full point.

Between the primary producers and the retailer is a wide range of intermediate handlers and processors, as well as a great variety of so-called industrial users and industrial consumers who require various rationed foods. The new OPA program is tailored to this involved situation and aims to make the rationing work for the public and every member of every trade concerned with the least possible disturbance and inconvenience.—*Excerpts from official release, OWI and OPA, regarding OPA-1944, March 12.*

Current Literature

Contributed by Helen Baughman, Janet Engebretsen and Hilda McEwen, Dietary Department, Johns Hopkins Hospital, Baltimore; Quindara Oliver Dodge, School of Home Economics, Simmons College, and Women's Educational and Industrial Union, Boston; and the JOURNAL staff.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

Vol. 65, January 1943

* Diabetic coma, acute pancreatitis and bacillus welchii peritonitis. M. M. Steiner and P. C. Tracy.—p. 36.
* Dosage of vitamin D from reports of the British Pediatric Association — p. 158.

Diabetic Coma. Ten children who died during diabetic coma were subjected to postmortem examination; 5 showed complications such as acute pancreatitis, pneumonia, and septicemia. Out of a group of 26, 4 were shown to have pancreatitis complicating the diabetes. A detailed case report is presented on one patient who had a combination of acute pancreatitis and *Bacillus welchii* peritonitis with fatal diabetic coma. There was widespread necrosis of the pancreas with islet tissue involved, which was responsible for the development of coma.

Dosage of Vitamin D. Because the incidence of active rickets is as great under 6 months of age as over, the prophylactic requirement of vitamin D is greater in the early months. In winter, sunshine cannot be relied upon to render enough natural irradiation of vitamin D. Cod liver oil supplied by the government contains not less than 100 I.U. vitamin D per gram. The maximum dosage is ½ teaspoon daily for children under 6 months, 1 teaspoon daily for those over 6 months. A recommendation was presented that pregnant and nursing women be given a supplement of 700 I.U. vitamin D daily.

AMERICAN JOURNAL OF MEDICAL SCIENCES

Vol. 205, January 1943

* The effect of a test meal high in fat on blood cholesterol in normal and obese individuals. E. Oppenheim and N. Bruger.—p. 77.
* Liver function in therapeutic malaria. I. Kopp and H. C. Solomon.—p. 90.

High-Fat Test Meal. Both normal and obese subjects were placed on low-fat, low-cholesterol diets for two days preceding the test meal which consisted of 500 cc. 20% cream. In normal subjects ingestion of the fatty meal failed to alter blood cholesterol. Obese subjects showed a significant increase of total lipids and fatty acids but there was no change in blood cholesterol content.

Liver Function. Nine malaria patients showed definite liver disturbances. There was a marked reduction of cholesterol, a fall in phospholipids, diminished hippuric acid excretion and a strongly positive cephalin flocculation test. The liver impairment cleared up in 3 to 6 weeks after termination of malaria. Administration of pentavalent arsenic after malaria did not seem to delay the return of liver function tests to normal.

AMERICAN JOURNAL OF PHYSIOLOGY

Vol. 138, January 1943

* Increased erythrocyte destruction on a high fat diet. A. Loewy, L. W. Freeman, A. Marchello and V. Johnson.—p. 230.
* The secretion of alkaline phosphatase by the dog's intestine. A. J. Kosman, J. W. Knulbersz and S. Freeman.—p. 236.
* Histological effects in rats resulting from adding rubidium or cesium to a diet deficient in potassium. R. H. Follis.—p. 246.
* Influence of gelatin ingestion on the concentration in the rat gastrocnemius of phosphocreatine and related compounds. S. M. Horwath.—p. 254.
The relation of food consumption, hypophysis and adrenal cortex to serum albumin metabolism in the rat. L. Levin.—p. 258.
* Correlation of vascular changes with changes in motor activity and secretion in the stomach of man. S. Wolf and H. G. Wolf.—p. 309.
* Liver function, pulse rate and temperature of hyperthyroid dogs. Effect of a yeast free diet and a high B vitamin diet. V. A. Drill, C. B. Shaffer and R. Overman.—p. 370.

Erythrocyte Destruction on High-Fat Diet. Findings in dogs indicate that red blood cell destruction proceeds at a faster rate on a high-fat than on a low-fat diet, due probably to the introduction of a hemolytic substance into the blood stream by way of the lymphatics.

Intestinal Secretion of Alkaline Phosphatase. In dogs the greatest phosphatase activity of duodenal, jejunal and ileal contents was found after protein and fat meals and the least after carbohydrate. Phosphatase is considered to be a true secretion of the intestinal tract.

Effects of Rb or Cs to K-Deficient Diet. Myocardial and renal necroses appeared in rats on a low-K diet but the addition of rubidium prevented their appearance. Cesium partially protected the kidney and to a lesser extent the heart.

Phosphocreatine in Muscle After Gelatin Ingestion. The feeding of gelatin, a rich source of amino-acetic acid, to adult rats as a supplement to an adequate diet did not influence the concentration in the gastrocnemius muscle of the chemical compounds known to be associated with muscular contraction. Gelatin exerted no creatinogenic effect. There was no evidence on the basis of increased excretion of creatine or creatinine of an increased destruction of muscle creatine.

Correlation of Functional Changes in Human Stomach. When an unusually large volume of gastric juice of high titratable acidity accumulates in an unobstructed stomach during a specified interval, it is safe to assume that the mucous membrane is relatively red and that no vigorous contractions are taking place in the stomach. When a small volume of gastric juice of very high titratable acidity is obtained under similar circumstances, it is likely that the mucous membrane is relatively engorged with blood and that especially vigorous contractions are taking place. Low acid values in the presence of small volumes of gastric juice suggest that the gastric mucosa is relatively pale and that no vigorous contractions are taking place.

Liver Function and Hyperthyroidism. The amount of B-vitamins fed has a direct relationship to the time elapsed before an abnormal liver function develops in thyroid-fed dogs. In the absence of thiamin, thyroid feeding does not produce tachycardia. Drop in pulse rate after about 80 to 100 days of thyroid feeding and a high B-vitamin diet seemed to be correlated with a compensatory hypertrophy of the heart.

AMERICAN JOURNAL OF PUBLIC HEALTH AND THE NATION'S HEALTH

Vol. 33, January 1943

* War and the health department. B. In a western county. W. L. Halverson.—p. 20.
* Hypothetical relationship of water supplies to poliomyelitis. K. F. Maxcy.—p. 41.

Surveys of the nutrition of populations. Description of the population, general methods and procedures, and the findings in respect to the energy principle (calories) in a rural population in middle Tennessee. J. B. Youmans, E. W. Patton and R. Kern.—p. 58.

War and Health. A "lunch-box derby" was held in Los Angeles in which thousands of women inspected lunches prepared by various commercial organizations. The lunches were judged by nutritionists as to food value. Good publicity made this a successful feature.

Water and Poliomyelitis. There is at present insufficient evidence to justify the belief that water is a medium which is of any practical importance in the spread of poliomyelitis.

ANNALS OF INTERNAL MEDICINE

Vol. 18, January 1943

* Recent advance in the therapy of gout. E. C. Bartels.—p. 21.
* Postoperative precipitation of vitamin deficiencies. M. Ellenberg, H. Dolger and H. Pollack.—p. 110.

Gout. Attention has been placed on phases of the disease rather than on prevention of recurring attacks of gout. At the Lahey Clinic, a satisfactory régime consists of a low-purine, low-fat, high-carbohydrate diet with cinchophen medication. Since the diet was low in vitamins A and the B complex, these were added; no alcohol was permitted. In a group of 31 patients on this plan, only 7 minor attacks of gout occurred as compared to 84 during a period before treatment. Even patients in the phase of chronic gouty arthritis responded favorably.

Postoperative Vitamin Deficiencies. Prolonged chronic illness may necessitate a restricted diet such as low-residue or bland for a long period of time. Even before operation, a patient may be in a state of partial vitamin depletion. During the postoperative period, nausea and vomiting contribute further to the debit side of the nutritional picture. A case report of malignant tumor is presented. After months of distress and insufficient food, a partial colectomy was performed. After one week of intravenous feeding, followed by a low-residue diet, the patient complained of a sore tongue; he was uncooperative and disoriented, and finally went on a "hunger strike." Riboflavin concentrate and niacin relieved symptoms of vitamin B complex deficiency within 24 hours.

ARCHIVES OF INTERNAL MEDICINE

Vol. 71, January 1943

* Induced thiamine deficiency in man. R. D. Williams, H. L. Mason, N. H. Power and R. L. Wilder.—p. 38.
* Effect of massive doses of vitamin D on calcium and phosphorus metabolism. K. P. Klassen and G. M. Cutris.—p. 78.
* Allergy—A review of the literature of 1942. F. M. Rackemann.—p. 107.

Thiamin Deficiency. Severe induced human thiamin deficiency produced mental depression, generalized weakness, giddiness, soreness of muscles, palpitation and precordial distress. Two human volunteers were placed on a basal diet containing 0.2 mg. thiamin q. d.; every 10 days a test dose, 1.0 mg. thiamin chloride, was administered. This served as a partial periodic cure of the deficiency, at which time appetite and activity would increase. By the 30th day of the test, signs and symptoms of deficiency appeared and a decrease in urinary excretion of thiamin was noted. By the 50th day, anorexia and weakness became more severe, and the subjects complained of paresthia of the legs. Dysfunction of the nervous pathways was noted by the 110th day, a symptom which responded to large doses of thiamin after many weeks of treatment.

Vitamin D and Calcium and Phosphorus Metabolism. Vitamin D has been used extensively in more than normal amounts in treatment of arthritis, with varying results. Spontaneous remissions and seasonal variations frequently occur. Observations confirm the assertion of Ropes and associates that there is no primary disturbance of calcium and phosphorus metabolism in patients with degenerative arthritis. Massive doses of vitamin D resulted in increased retention of calcium and increased urinary excretion of calcium. Fecal loss of calcium was decreased. Vitamin D in massive doses did not produce demonstrable changes in the activity of the parathyroids or the thyroid.

Allergy. This is an excellent selection of pertinent comments on the complex subject of allergy. Allergy has been approached from many angles, yet it appears that tissues and their reactions constitute the real problem. Studies of antibodies are interesting, but only secondary in the great problem of allergy.

ARCHIVES OF PEDIATRICS

Vol. 60, January 1943

* Milk. H. W. Soper.—p. 1.

Milk. Milk is incriminated as a disseminator of infection. All mammals, excepting the human, cease the use of milk as a food after weaning. As a result of his violation of a primary biologic law, man has been penalized by the host of infectious diseases that are disseminated by milk. The dairy cow, stimulated and bred to yield milk over a long period of time, develops hypertrophy of the mammary gland and is frequently subject to a low-grade streptococcus mastitis. Milk is such a good culture medium that it is frequently contaminated by infectious agents not originating in the cow. Research into the habits of people of ancient and modern civilizations reveals that they were consumers of milk and all suffered from dental caries. Primitive peoples and savages were free from this disease until they came in contact with civilization. Raw milk is unfit for human consumption. Pasteurized milk as it reaches the consumer usually contains pathogenic bacteria and is not to be relied upon as a safe food.

BRITISH MEDICAL JOURNAL

No. 4278, January 2, 1943

Dietetics of pregnancy. Editorial.—p. 16.

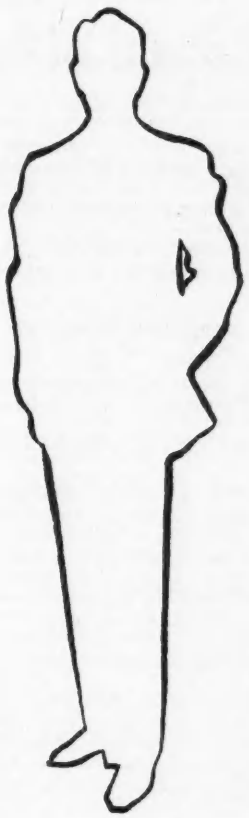
No. 4279, January 9, 1943

* The premature infant: Management and prognosis. W. R. Collis and M. A. Majekodunmi —p. 5.

No. 4280, January 16, 1943

* Calorie control, a new dietetic treatment of diabetes mellitus. A. C. Crooke and E. Scott.—p. 64.
* Nutrition in relation to cancer incidence. Editorial.—p. 79.

Premature Infant. Breast milk is the ideal food for infants but peptonized milk, dried acid milk or boiled cow's milk may be substituted. Infants weighing less than 4 lb. are tube-fed about 10 oz. Quality is secondary to quantity,



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some infants taking 45 to 50 calories per pound body weight. Vitamin concentrates are given daily.

Calorie Control in Diabetes Mellitus. A diabetic diet is described in which total calorie value is kept constant but an unlimited variation in the proportion of carbohydrate, protein and fat is permitted. Each meal is arranged on the basis of a given number of units of food, each equivalent to 50 calories. This diet has been found satisfactory after one year's trial on a large series of cases.

Cancer. Bittner found in the milk of mice of high-breast-cancer strains a factor concerned in the development of spontaneous breast cancer.

BULLETIN OF THE JOHNS HOPKINS HOSPITAL

Vol. 72, January 1943

* Pyridoxine deficiency in swine, with particular reference to anemia, epileptiform, and fatty liver. M. M. Wintrobe, R. H. Follis, N. N. Miller, H. J. Stein *et al.*—p. 1.
* Effect of diet deficient in carbohydrate on the rat. R. J. Follis and W. N. Straight.—p. 39.

Pyridoxine Deficiency. Induced pyridoxine deficiency produces a severe anemia in pigs, characterized by microcytosis, an increase of reticulocytes and nucleated red cells, and a rise of serum iron. Seizures similar to *petit mal* and *grand mal* attacks in humans were observed. After prolonged feeding of the deficient diet, there was fatty infiltration of the liver. It is suggested that pyridoxine deficiency leads to the development of a metabolic disorder related to iron utilization; the nature of this mechanism is not understood.

Carbohydrate-Deficient Diet. Rats on a highly purified carbohydrate-free diet, with supplementary doses of the essential vitamins, grew normally. There were no significant changes in the adrenal or thymus glands or body weight ratios in the deficient animals as compared to normal controls.

CANADIAN JOURNAL OF PUBLIC HEALTH

Vol. 34, January 1943

* Applied nutrition. L. B. Pett.—p. 1.
* A dietary survey in Winnipeg. M. C. Hilz.—p. 6.
The Canadian nutrition program. Editorial.—p. 38.

Applied Nutrition. Canada's aim should be to produce sufficient and proper foods under an assured price, to store, process, equitably distribute and properly consume these foods on a nutritional basis. The purpose of the recently formed Food Requirements Committee seems to be in this direction.

Dietary Survey. In 29 families studied, the intake of calories, protein, iron and vitamin A was reasonably adequate. Calcium intake was low, with 24% of the families markedly deficient and over 80% markedly deficient in both thiamin and vitamin C. Milk to meet the calcium requirement, whole cereals and Canada Approved bread to overcome thiamin deficiency, and increased consumption of fresh fruit and vegetables to combat vitamin C deficiency is stressed. Although the diet can be improved as a result of education, insufficient income is the difficulty in most cases. Some form of subsidy may be necessary where the wage-earner has reached the peak of his earning power and still is unable to purchase the optimum quantity and quality of food for his family.

CANADIAN MEDICAL ASSOCIATION JOURNAL

Vol. 48, January 1943

Note on rose hips and evergreens as sources of vitamin C. G. Hunter and J. Tuba.—p. 30.
* The use of evaporated half-skimmed milk in infant feeding. C. E. Snelling.—p. 32.
* The effective use of vitamins. C. W. Scull.—p. 39.

Half-Skimmed Evaporated Milk. Many babies who were regurgitating ordinary evaporated milk were placed on skimmed evaporated milk with definite improvement of symptoms. Changing from regular evaporated milk to partially skimmed evaporated milk corrected failing appetite in some. Partially skimmed evaporated milk is now on the commercial market.

Vitamins. A "vitamin famine" does not extend uniformly over the entire population and indiscriminate recommendation of vitamin pills, elixirs and capsules without regard to dietary supplies of vitamins or individual requirements is unwarranted. A diet described by the National Research Council is cited, not only as a standard of general reference but as a convenient basis for nutritional prescription.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 121, February 6, 1943

* Prognosis in hypertension. R. M. Daley, H. E. Ungerleider and R. S. Gubner.—p. 383.
* Handbook of nutrition: VIII. Iodine in nutrition. G. M. Curtis and M. B. Fertman.—p. 423.

Vol. 121, February 13, 1943

* The effects of ascorbic acid in relation to lead absorption. E. E. Evans, W. D. Norwood, R. A. Kehoe and Willard Machle.—p. 501
* The therapeutic value of ultraviolet radiation. Council on Physical Therapy.—p. 513.
* American society for research in psychosomatic problems. Editorial.—p. 517.
* Dihydrotachysterol. Editorial.—p. 518.
* Reserve protein in the liver. Current comment.—p. 518.
* B vitamins in cancerous tissues. Current comment.—p. 519.
* Fluctuations in hypertension. Current comment.—p. 519.

Vol. 121, February 20, 1943

* Does vitamin A deficiency exist in clinical urolithiasis? H. J. Jewett, L. L Sloan and G. H. Strong.—p 566.
* A mechanism of fatigue in neuropsychiatric patients. S. A. Portis and I. H. Zitman.—p. 569.
* Handbook of nutrition: XXIII. Medical evaluation of nutritional status. H. D. Kruse.—p. 584.

Prognosis in Hypertension. Of the innumerable therapeutic measures that have been advocated for hypertension only two have been found effective, potassium thiocyanate and surgical procedures on the abdominal sympathetic nervous system. Very recently an active depressor principle has been isolated from the kidney which is effective in lowering blood pressure in experimental hypertension and which has been found promising in a few clinical cases. This work is still in the experimental stage. Relief of symptoms is not always an accurate guide; since there is a psychic element symptoms may be controlled by a large variety of nonspecific measures or placebos. One cannot expect that any form of therapy, however effective in reducing blood pressure, can beneficially influence organic and irreversible vascular changes. Since the great majority of cases with hypertension are observed rather late in the course of the disease when cardiac and vascular complications have supervened, no specific therapy can hold out much hope at this stage. This situation is similar to that in diabetes mellitus in which insulin corrects the metabolic derangement but cannot erase the damage resulting from an unrecognized and untreated condition present for years. As in the case of diabetes, with the development of effective therapeutic procedures which will lower the blood pressure, it will be necessary to educate the public to frequent examinations so that early hypertension and even a predisposition to hypertension will be recognized.

Iodine in Nutrition. It has been estimated that the average adult ingests about 6.2 gm. salt daily. Calculated on this basis, the approximate amount of potassium iodide

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A timely book . . . on a vital subject! With more than five million men and women in industry now carrying their lunch, it is essential to the war effort that these "production soldiers" eat the right kind of mid-shift meals. This 16-page booklet sums up the fundamentals of planning lunch box meals that help workers stay strong, vigorous and on the job. It carries the seal of acceptance of the Committee on Foods and Nutrition of the American Medical Association.

Send for free copy. Desk copies of "HOW TO PACK LUNCH BOXES FOR WAR WORKERS," without charge to home economists and teachers. Extra quantities available at 2c each. Write

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High Spots of Concrete Information in this Booklet

- Plan the Lunch Box with the Other Meals in Mind
- What is a Good Lunch?
- Every Lunch Box Should Contain These Foods
- The Work They Do Makes a Big Difference
- When War Workers Eat Depends on When They Work
- Hints on Packing a Lunch Box
- Tips from the People Who Eat the Lunch
- Food Shortages . . . and Lunch Box Meals
- 30 Menus for Nutritious Lunches
- 69 Tested Recipes for Lunch Box Foods

Westinghouse *ELECTRIC APPLIANCE DIVISION*

TUNE IN ON JOHN CHARLES THOMAS, WESTINGHOUSE PROGRAM, NBC, SUNDAY AT 2:30 P.M., E.W.T.

intake from iodized salt would be 620 mcg., equivalent to about 474 mcg. iodine, or more than twice the suggested optimal amount and providing a sufficient reserve. The widespread prevention of endemic goiter and its sequelae will depend not only on the preparation and consumption of an adequate iodized salt but also on the persistent education of the public to its necessity. Under ever increasing demands of wartime effort and production each individual should have, to thrive and function at his best, among other important elements, an adequate supply of iodine. For iodine also plays an important role in the general well-being of all mammals. The increased physical activity and emotional stress occurring in our struggle for survival put greatly increased demands on the human body. Thus the optimal activity essential for any all-inclusive war effort cannot be maintained without a sufficient supply of iodine.

Ascorbic Acid Treatment in Lead Poisoning. Ascorbic acid nutrition in workers in a large plant was found to be generally poor and somewhat poorer in lead workers than in others. Careful study of a large group of lead workers failed to reveal any effect of ascorbic acid taken orally in daily quantities of 100 mg. on the lead concentration in the blood or on the elimination of lead in the feces or urine. No difference was noted in the physical condition of the men or in the number and severity of complaints. No change was found in the numbers of erythrocytes or stippled erythrocytes or in the hemoglobin in the blood. No reason has been found for recommending the use of ascorbic acid to minimize the effects of lead absorption.

Ultraviolet Radiation. The blood sugar of normal men is not influenced to any extent by ultraviolet irradiation. In some persons with diabetes the blood sugar may be temporarily diminished. The decrease is probably due to increased excretion of insulin and may be accompanied by increased storage of glycogen in the heart, liver and muscle. It is the opinion of most authorities that irradiation of lactating women increases to some extent the quantity and antirachitic potency of the milk. Irradiation of moderate intensity increased endogenous nitrogen metabolism. Residual nitrogen is usually diminished. The excretion of uric acid is said to increase, giving support to the use of ultraviolet in the treatment of gout. Ultraviolet irradiation may double the fat content of the blood, cholesterol increasing by 30%. Ultraviolet irradiation exerts a glycogen storing effect, preventing the lowering of the respiratory quotient after muscular exercise due to glycogen impoverishment. Animals "will grow as well in darkness as in light if the diet is complete." Ultraviolet has no influence on the activity of the thyroid. The goiter-producing power of cabbage is reported to be increased by ultraviolet irradiation. The antirachitic effect of ultraviolet occurs in the lowermost cells of the horny layer and in the prickle cells of the malpighian layer, while the production of erythema takes place in the basal cells (germinativum) of the malpighian layer and in the corium. The horny, clear and granular layers act as filters. Ergosterol and cholesterol can be activated by ultraviolet rays which pass through the epidermal layer of the skin. Blood in the superficial capillaries absorbs only a small percentage of energy incident on the skin.

Research in Psychosomatic Problems. "In somatic medicine the patient's stomach, liver or blood vessels are the doctor's concern; in psychiatry the patient's actions are investigated. Psychosomatic medicine attempts to bring together these two points of view. In the psychosomatic approach the investigators seek to find the relationship between what the stomach is doing and what the patient as a whole is doing. How do the patient's emotions, his effort, hopes, discouragements and anxieties influence the different parts of his body?" Psychosomatic medicine, however, is not a new specialty. Such ancient expressions as melancholia (*melas*, black; *chole*, bile) reflect concepts concerning the relation of mental symptoms to bodily functions. Understanding of the patient's mental condition in the past was primarily a question of intuition, usually called the art of medicine or, in its more superficial form, "bedside manner." Psychosomatic research strives to transmute this art into a science, basing conclusions on well established principles affecting the relationship of emotions and bodily functions. Disturbances such as air neurosis and the more acute forms of "pilot's fatigue" are primarily of psychosomatic nature and constitute one of the major problems of aviation medicine.

Dihydrotachysterol. A further differentiation between dihydrotachysterol and vitamin D has been reported. It is concluded that vitamin D is essential for certain cellular functions in the body and cannot be replaced by dihydrotachysterol. Investigations of the comparative activity of the two substances have emphasized again the high specificity of biologic function conditioned by slight changes in the structure of chemical agents.

Reserve Protein in the Liver. Pfluger's suggestion that the liver might serve as a storehouse for protein as well as for carbohydrate, in the light of experimental evidence since accumulated, is believed to be correct. The protein enrichment of the liver which follows the administration of high-protein diets is associated not only with hyperplasia or hypertrophy but also with an increased content of protein per unit weight of tissue. The importance of the protein stores of the body is becoming increasingly appreciated. The reserve protein helps to protect the liver against injury by toxic agents. The role played by the liver in this connection adds one more to the long list of functions known to be performed by this organ. The observed relationship between an inadequate amount of dietary protein, the consequent low-protein reserve and enhanced susceptibility to hepatic injury by a variety of toxic agents is noteworthy.

B-Vitamins in Cancerous Tissues. The occurrence of the vitamins of the vitamin B complex in all forms of living matter constitutes strong presumptive evidence of their essential nature for the fundamental vital processes. Riboflavin plays a part in cellular oxidation and the oxidation processes in cancerous tissues differ significantly from those in noncancerous tissues. Cancers were found to contain about 2 to 3 mcg. riboflavin per gram of moist tissue. Noncancerous tissues require nicotinic acid for their essential functions, but little is known about the requirements of cancerous tissue. The transformation to the cancerous state involves a decrease in nicotinic acid content. Whether this signifies low utilization of this vitamin or low storage capacity and efficient utilization is not clear. The comparative constancy of the vitamin level in tumors may be an indication of the essential nature of the vitamin for cancer metabolism. Biotin has considerable interest as a possible essential catalyst for cancerous processes. Cancers, however, apparently neither particularly require nor are associated with a high biotin content. The same is true for pantothenic acid.

Fluctuations in Hypertension. Extreme fluctuations of the blood pressure may occur without drug intervention. Because anxiety will increase blood pressure, the reassurance of repeated conferences with a physician may result in a reduction of pressure that cannot be ascribed to a specific remedy. In presenting criteria for the evaluation of any form of therapy, the author differentiates between hypertensive effects and relief of symptoms; many methods relieve the latter.

Clinical Urolithiasis and Vitamin A Deficiency. Although a free diet produces widespread epithelial changes

#3 This is part of a series on matters of professional, educational and public interest, primarily related to nutrition and the scientific approach to the food problem, and giving the background of the products of General Mills. These messages are being disseminated through a number of professional and specialized publications . . . in the hope of providing material useful for the readers.

MORE ABOUT THE

Food and Nutrition Board

OF THE

NATIONAL RESEARCH COUNCIL

IN A PREVIOUS ISSUE WE TOLD YOU HOW IT CAME INTO BEING AND THE IMMEDIATE PROBLEMS IT IS HELPING SOLVE. HERE WE TELL YOU MORE ABOUT THIS NATIONAL NUTRITIONAL "STEERING COMMITTEE," AND HOW IT IS HELPING BUILD A HEALTHIER AMERICA

1. *What is our country's long-range nutrition problem?*

(*Answer*) There is comparatively little "hollow hunger" in this country—to use the term being increasingly used to denote the hunger you *feel*. But there is a great deal of "hidden hunger"—the dearth of "protective food factors" that reveals itself in various insidious ways.

"Hollow hunger" is largely an economic problem. "Hidden hunger" is chiefly a scientific and educational problem; it is largely concerned with the *quality* of the diets people eat.

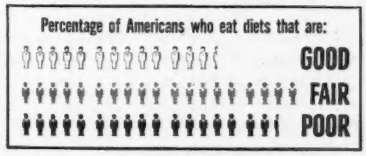
According to recent government data, only about a fourth of our people eat good diets. More than a third (*note table below*) eat diets that are only fair and another third diets that are definitely poor.

Our country's long-range nutritional problem *is to correct this situation.*

2. *What approach is advised by the Food and Nutrition Board?*

(*Answer*) The authorities comprising the Food and Nutrition Board—recognizing the inadequacy of certain vitamins and minerals in the diets of a large proportion of our families—turned to bread, flour and other cereal products as logical "carriers" of these deficient food elements, and recommended the "enrichment" or "restoration" of these foods.

It is estimated that present-day Americans consumed, until recently, less than half as much vitamin B_1 as Americans of earlier generations. *The universal consumption of enriched flour and bread increases our consumption of this one vitamin alone over* 60%.



From "Are We Well Fed," Bur. Home Ec., U.S.Dept. of Ag.

3. *What further steps were recommended?*

(*Answer*) In addition to enrichment of certain types of foods, the Food and Nutrition Board of the National Research Council gave impetus to a program of education. Carried out thus far through the government's Office of Defense Health and Welfare Services, this program is being promoted in two ways: (1) through the intensive work of national, regional, state and local nutrition committees, and (2) through cooperation of food advertisers.

4. *What is the objective of this education program?*

(*Answer*) One of the earliest steps by the Board for the National Nutrition Program was to prepare a "Food Guide." This guide to proper food selection

EVERY DAY, EAT THIS WAY...
MILK and MILK PRODUCTS . . . at least a pint for everyone—more for children—or cheese or evaporated or dried milk.
BREAD and CEREAL . . . whole grain products or enriched white bread and flour.
ORANGES, TOMATOES, GRAPEFRUIT . . . or raw cabbage or salad greens—at least one of these.
MEAT, POULTRY or FISH . . . dried beans, peas or nuts occasionally.
GREEN or YELLOW VEGETABLES . . . one big helping or more—some raw, some cooked.
EGGS . . . at least 3 or 4 a week, cooked any way you choose—or in "made" dishes.
OTHER VEGETABLES, FRUIT . . . potatoes, other vegetables or fruits in season.
BUTTER and OTHER SPREADS . . . vitamin-rich fats, peanut butter, and similar spreads.
. . . THEN EAT OTHER FOODS YOU ALSO LIKE

(*reproduced above*) is the basis of the national program of nutrition education. It lists eight broad classes of foods which should be eaten daily for the promotion of maximum health.

Diets including these foods in the recommended amounts provide liberally for needed "protective elements."

5. *What are the Board's growing duties?*

(*Answer*) As the United Nations war effort grows in intensity, our own food problem grows more acute. Food shortages call for decisions as to kinds and quantities of specific foods indispensable for national health. *Such decisions must be taken into account in rationing.*

Hence the work of the Food and Nutrition Board grows in importance. Thanks to the application of this group to the scientific aspects of our food problem, America, *even in wartime,* will achieve the best possible level of nutrition for the promotion of our national good health and strength.

General Mills, Inc., of Minneapolis, Minn., the country's largest processor of cereal grains, directs its policies to accord with the findings and recommendations of bodies such as the Food and Nutrition Board of the National Research Council, and gives its support to the National Nutrition Program. In these times of food scarcities, enriched flour and restored cereals must play an increasingly important part in the national dietary. (Some leading General Mills' products are illustrated at the right.)

All brands of family flour sold by General Mills have been enriched since June 1, 1942, or longer, including Drifted Snow "Home-Perfected" Flour and all flour in Sperry Pancake and Waffle Flour. Sperry Wheat Hearts also contain whole grain vitamin and mineral values.

General Mills has also consistently urged bakers to enrich their white bread. The enrichment of bakers' white bread can be accomplished with Enriched Flour, high potency enriched yeast, or by adding nutrients to bread doughs. All bakers' white bread is now enriched.

"Kitchen-tested" and "Home-Perfected" are reg. trade marks of General Mills, Inc.

which may lead to the formation of urinary calculi in experimental animals, as yet there is no positive proof that a "subclinical" vitamin A deficiency is an etiologic factor in urolithiasis in man.

Fatigue in Neuropsychiatric Complaints. Fatigue may be a prominent symptom of neuropsychiatric complaints. There is experimental and clinical evidence to show that a possible mechanism is hyperinsulinism which may be the result of temporary or prolonged stimulation of the right vagus nerve resulting from emotional processes being relayed through the hypothalamus to the autonomic nervous system. The injection of atropine prevents this stimulation and allows the blood sugar curves to return to near normal. Definite clinical improvement has been noted in the few cases thus far studied.

Evaluation of Nutritional Status. The author points out that the concept of nutrition and the methods and criteria of evaluating it have been undergoing an evolution during the past half-century. Cross sectional methods of examination are outlined and described, followed by a discussion of the deficiency diseases. Stress is laid on the early diagnosis of the manifestations of suboptimal nutrition. The characteristics of these manifestations are described and the means of their detection. The article is to be continued.

JOURNAL OF BIOLOGICAL CHEMISTRY

Vol. 147, January 1943

* Blood changes following glucose, lactate, and pyruvate injections in man. E. Bueding and W. Goldfarb.—p. 33.
* The effect of dietary calcium, phosphorus, and vitamin D on the utilization of iron. I. The effect of phytic acid on the availability of iron. I. Fuhr and H. Steenbock.—p. 59.
* The effect of dietary calcium, phosphorus, and vitamin D on the utilization of iron. II. The effect of vitamin D on body iron and hemoglobin production. I. Fuhr and H. Steenbock.—p. 65.
* The effect of dietary calcium, phosphorus, and vitamin D on the utilization of iron. III. The relation of rickets to anemia. I. Fuhr and H. Steenbock.—p. 71.
* Effect of sulfanilamide accompanied by acid or alkali upon the acid-base equilibrium of the dog. Possible influence of carbonic anhydrase. A. H. Free, D. F. Davies and V. C. Meyers.—p. 167.
* Factors affecting the hydrogen ion concentration of the contents of the small intestine. C. S. Robinson, H. Luckey and H. Mills.—p. 175.
* The absorption and retention by dogs of single massive doses of various forms of vitamin D. A. F. Morgan and N. Shimotori.—p. 189.
* Mechanism of vitamin D action in dogs shown by radioactive phosphorus. N. Shimotori and A. F. Morgan.—p. 201.

Blood Glucose Changes. In human subjects, a single injection of glucose was followed by a rise in pyruvic and lactic acids in the blood, which returned to normal in about two hours. A continuous infusion of glucose produced a rise in blood pyruvate which was sustained as long as the infusion was continued. Insulin had no effect on the pyruvic acid curves after a single glucose injection, but produced a further rise in the pyruvic acid level during continuous glucose infusion.

Phytic Acid and Iron. With a "synthetic" ration furnishing a limited amount of iron as ferric chloride and an amount of calcium optimal for growth and calcification, slightly less hemoglobin was produced in rats when the optimal amount of phosphorus was supplied as phytic acid rather than as a mixture of the mono- and dipotassium phosphates. An excess of calcium reduced the formation of hemoglobin and the storage of iron. Vitamin D improved the storage of iron and the formation of hemoglobin when the diet contained optimal amounts of calcium and phosphorus. No such effect was observed when the diet contained an excess of calcium. With milk supplemented with copper and manganese as the basal ration, a limited amount of iron as ferric phytate produced 19% less hemoglobin than an equal amount of iron in the form of ferric ammonium sulfate.

Vitamin D and Iron. When vitamin D was added to a "synthetic" ration optimal for growth in its content of phosphorus and calcium and of known iron content, there resulted an increase in hemoglobin and especially in the total amount of body iron in rats. Although vitamin D had no effect on body weight, it produced a marked increase in the weight of the liver. In contrast to the beneficial effect on the storage of iron, vitamin D had no effect on the storage of copper.

Rickets and Anemia. Low-calcium and low-phosphorus rickets did not reduce the amount of body iron nor the rate of hemoglobin synthesis in the rat.

Sulfanilamide and Acid-base Balance. Therapeutic quantities of sulfanilamide do not cause marked changes in the acid-base equilibrium in the dog. Sulfanilamide prevented any increase in serum *p*H when given with alkali but the decrease in serum *p*H after acid was accentuated by sulfanilamide.

Hydrogen-ion Concentration in Small Intestine. Studies of acid-base conditions in intestinal contents indicate that the progressive increase in *p*H throughout the jejunum is due to a combined increase in bicarbonate and decrease in CO_2 tension. High values in the ileum are due to increased bicarbonate. The sharp drop in *p*H of alkaline solutions introduced into the intestine is due to a relatively rapid influx of CO_2. Subsequent formation of bicarbonate returns the values to the equilibrium point. Ammonium chloride acidosis causes no significant alteration in the reaction of intestinal contents, and hence does not increase calcium absorption by increasing the acidity of the solutions in the gut. Bicarbonate alkalosis produces a rise in *p*H.

Massive Doses of Vitamin D. In rats, irradiated animal sterol is more rapidly absorbed and more rapidly excreted, immobilized, or destroyed when fed in excess than is irradiated ergosterol. The vitamin D of tuna liver oil appeared to be milder and more transitory in its effects than either of the other forms.

Vitamin D Effect on Radioactive P. Vitamin D probably does not exert its therapeutic effects through improvement in intestinal absorption of P but rather by intensification of P turnover in bone with resultant hyperphosphatemia and decreased P turnover.

JOURNAL OF CLINICAL INVESTIGATION

Vol. 22, January 1943

* The effect of calcium carbonate, aluminum phosphate, and aluminum hydroxide on mineral excretion in man. J. B. Kirsner.—p. 47.

Effect of Anti-Acid Agents on Mineral Excretion. Ingestion of calcium carbonate, aluminum phosphate, or aluminum hydroxide, in the quantities used in treatment of peptic ulcer, places no appreciable burden on the processes of acid-base metabolism. Necessary adjustments of acid-base excretion are relatively small and are accomplished with remarkable precision. The electrolyte constitution of the blood plasma is not disturbed.

JOURNAL OF NUTRITION

Vol. 25, January 11, 1943

* The choline content of feeds. M. Rhian, R. J. Evans and J. L. St. John.—p. 1.
* Thiamine, riboflavin, pyridoxine and pantothenate deficiencies as affecting the body composition of the albino rat. L. Vories and H. P. Moore.—p. 7.
* The interrelation of calcium and fat utilization. C. E. French and R. F. Elliott.—p. 17.
A short method of calculating the nutritive value of diets. G. H. Berryman and C. Chatfield.—p. 23.
* The utilization for hemoglobin regeneration of the iron in salts used in the enrichment of flour and bread. F. I. Nakamura and H. H. Mitchell.—p. 39.

A 2-WAY MEAT EXTENDER

NABISCO SHREDDED WHEAT readily adaptable to numerous meat extender recipes and supplies valuable nutrients

In the search for meat extenders and meat substitutes in the wartime diet, it should be recognized that whole wheat contributes, in addition to protein, appreciable amounts of other elements present in meats—such vital elements as iron, phosphorus, niacin and thiamin (Vitamin B_1).

Because Nabisco Shredded Wheat is 100% whole wheat and contains all of these health-building elements, it becomes a logical meat extender in wartime recipes—such as the meat ball recipe illustrated above.

In addition, because it is toasted in slender strands, Nabisco Shredded Wheat is easily crushed and readily utilized in a great variety of appetizing meat extender recipes.

In such recipes the toasted nut-like flavor of Nabisco Shredded Wheat brings out the best flavors in meats. Good appetite and balanced diet are both successfully maintained.

When recommending Nabisco Shredded Wheat, it is well to insist on the original Niagara Falls product.

BAKED BY NABISCO
NATIONAL BISCUIT COMPANY

* Factors affecting the thiamine content of breast milk. E M. Knott, S. C. Kleiger and F. Forres-Bracamonte.—p. 49.
* Disappearance of cellulose and hemicellulose from the digestive tracts of children. F. C. Hummel, M. L. Shepherd and I. G. Macy.—p. 59.
* The minimum daily requirement of thiamine of man. R. D. Williams, H. L. Mason and R. M. Wilder.—p. 71.

Choline Content of Feeds. Cereals are poor sources of choline, and animal products are good sources. There was a significant negative correlation between the choline content of the diet and the incidence of perosis in turkey poults.

B-Vitamin and Body Composition. In female rats thiamin promoted gains of fat, water and protein characteristic of normal growth. In male rats it affected only the fat content. The primary effect of riboflavin was to increase the body fat but a secondary growth effect was evident in male rats. Pyridoxine, like riboflavin, appeared to affect the male rats more prominently than the females. In both sexes the primary effect of pyridoxine was associated with gains of water and protein and there was no significant effect on body fat content. Pantothenate promoted gains of fat, water and protein characteristic of normal growth. It was the only one of the four vitamins studied which had a general effect on growth uncomplicated by sexual differences and by specific effects on the composition of the body increase. None of the four vitamins affected gains of nonprotein, nonfatty dry substance.

Calcium and Fat Utilization. The evidence presented indicates a slight interference of oleo oil with calcium utilization by the albino rat. The acidity of the contents of the duodenum, jejunum, ileum and cecum was diminished by increase in the fat content of the diet, this increase in intestinal acidity being associated with decrease in retention of calcium.

Iron and Hemoglobin Regeneration. For hemoglobin regeneration the high availability of the iron in sodium iron pyrophosphate and in ferrum reductum testifies to their value as supplements for the enrichment of white flour. The iron of ferric phytate is only about half as well utilized as the iron of ferric chloride, which may explain the low utilization of the iron of wheat.

Thiamin Content Breast Milk. The average thiamin content of breast milk was 15.1 μg. per 100 ml. milk. Colostrum contained almost no thiamin and the vitamin increased only gradually in the milk as lactation progressed. Use of intramuscular thiamin during labor, and oral thiamin supplements postpartum, caused rapid increase in thiamin content of the milk within 9 days to values such as most women achieved in 3 or 4 weeks. There was a tendency for low milk thiamin values to be associated with low blood thiamin values, and higher milk levels with higher blood levels. Some women could secrete milk containing 200 μg. or more per 100 ml. on intakes of about 1.5 mg. thiamin. Others required higher dietary thiamin or thiamin therapy.

Excretion of Complex Carbohydrates. A roughage intake of 5 to 7 gm. fiber per day provided adequate amounts of complex carbohydrates for normal laxation and all other known physiologic processes of normal children, and there was no evidence of any untoward effects upon the absorption of nitrogen and the mineral elements.

Minimum Requirement of Thiamin. In light of the findings in this study, and to provide some safeguard against higher proportions of nonfat calories in some diets, individual variability and other causes of increased minimum requirement, the daily allowance of 0.6 mg. thiamin per 1000 calories, recommended by the Food and Nutrition Board of the National Research Council, is none too high.

JOURNAL OF PEDIATRICS

Vol. 22, January 1943

Is breast milk adequate in meeting the thiamine requirement of infants? E. M. Knott, S. C. Kleiger, F. W. Schlutz and G. Collins.—p 43.

* Vitamin K in hemorrhagic disease of the newborn infant. C. E. Snelling and W. Nelson.—p, 77.

Assessing the physical condition of children N. C. Wetzel.—p. 82.
The families of the Child Research Council. D. G. Dunlop.—p. 111.

Vitamin K. Thyloquinone in oil given by mouth in 5 mg. doses to mothers after labor has commenced will prevent extreme degrees of hypoprothrombinemia in the newborn infant at birth and during the first week or ten days of life. It will prevent hemorrhagic disease of the newborn infant. Hypoprothrombinemia in untreated infants has a seasonal incidence, being more frequent in February and March, which is the period during which hemorrhagic disease is common. One infant with hemorrhagic disease recovered spontaneously. The diet of the mother bore no relation to the hypoprothrombinemia of the offspring. Vitamin K-like compounds given intramuscularly are effective in lowering the prothrombin time.

LANCET

Vol. 2, December 5, 1942

* Vitamin C and repair of injured tissues. G. H. Bowne.—p. 661.

Vol. 2, December 12, 1942

* The war and school-boy's food. E. M. Widdowson and R. A. McCance. —p. 689.

Nutrition of Oxfordshire children in war-time. D. C. Wilson.—p. 692.
Vitamin C nutrition. Editorial.—p. 699.

Vol. 2, December 19, 1942

Nutrition and economic position of Ceylon. L. Nicholls and A. Nimaloswia. —p 734.

Vol. 2, December 26, 1942

Slit-lamp microscope in nutrition surveys. J. N Kodicek and J. Yudkin. —p. 753.

Vitamin C in Injuries. Vitamin C plays a fundamental part in regeneration of tissues and should become routine treatment in any injury. Results with animals suggest that calcium ascorbate may prove a valuable therapeutic substance for the treatment of fractures, but clinical trials with this substance have not yet been carried out.

School Boy's Food in Wartime. A study of school boys showed that total caloric intake, protein, Ca, P, Fe and vitamin B have all been maintained at prewar levels. Vitamin C and animal proteins were low. Day school pupils had an advantage over boarders since they could benefit from the rations of younger children in the family.

SCIENCE

Vol. 97, January 8, 1943

* Vitamin C (ascorbic acid) content of the buffalo-berry. D. Knowles and I. Wilk.—p. 43.
* Subclinical vitamin deficiency. M. H. Carleen, N. Weissman, P. S. Owen and J. W. Ferrebee.—p. 47.

Vol. 97, January 29, 1943

* Annual report of the Secretary of Agriculture. Science News.—p. 6.
* Peacetime values from a war technology. G. Egloff.—p. 103.

Vitamin C in Buffalo-Berries. The buffalo-berry, a native fruit of North Dakota, has been found to contain an abundance of vitamin C, well over 150 mg. per 100 gm. The berry is usually consumed as jam and though some destruction of vitamin C occurs, samples of buffalo-berry jam contained 80 to 90 mg. vitamin C per 100 gm.

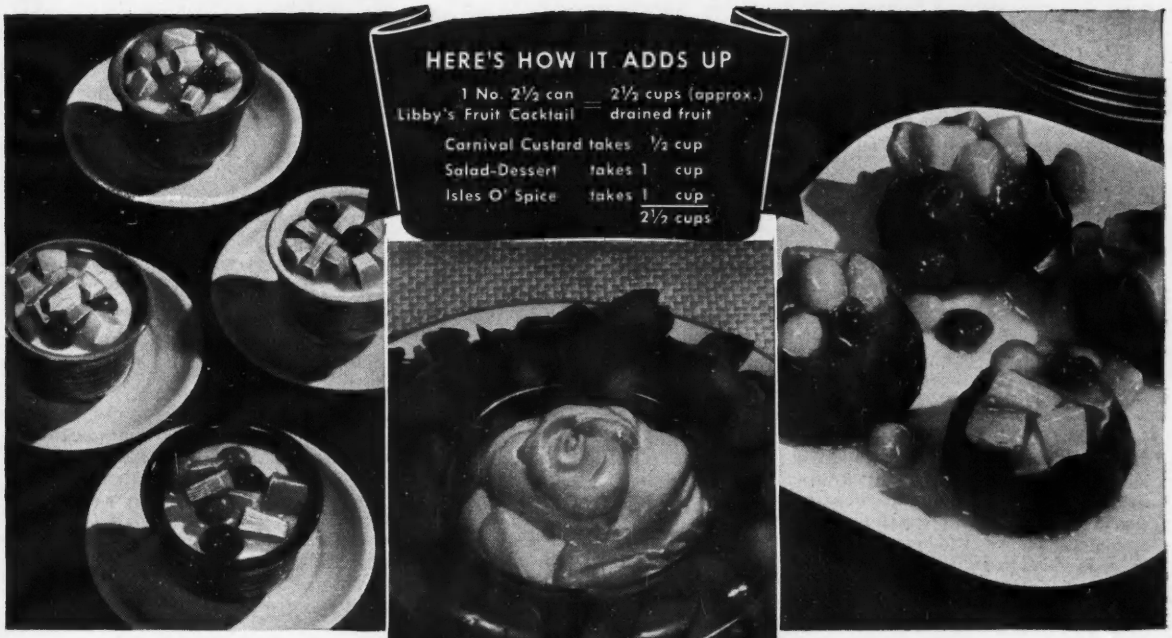
Subclinical Vitamin Deficiency. Thiamin content of skeletal muscle may serve as an index of thiamin nutrition. Changes in muscle thiamin, in general, parallel changes in other tissues.

Annual Report of Secretary of Agriculture. Less wheat, more meat; also more vegetables, eggs, dairy products, vegetable oils; steady on cotton and tobacco. This in a

Home Economics Magic

3 delectable dishes (each serves 4) from a single can of Libby's Fruit Cocktail!

With canned fruits rationed, students and homemakers will look to you more and more for this kind of help


HERE'S HOW IT ADDS UP
1 No. 2½ can Libby's Fruit Cocktail = 2½ cups (approx.) drained fruit
Carnival Custard takes ½ cup
Salad-Dessert takes 1 cup
Isles O' Spice takes 1 cup
2½ cups

CARNIVAL CUSTARD

2 tbsp. cornstarch
¼ tsp. salt
¼ cup sugar
1 egg
1 cup milk
1 cup water
1 tsp. vanilla
½ cup Libby's Fruit Cocktail

Mix cornstarch, salt and sugar. Beat egg slightly and add milk and water. Add to cornstarch mixture. Cook over hot water, stirring constantly until thick. Cool. Add vanilla. Pour into 4 serving dishes and top with Libby's Fruit Cocktail.

This one-egg custard is smooth and delicious—interesting to demonstrate in a lesson on custards.

SALAD-DESSERT

½ pkg. strawberry gelatin
1 cup Libby's Fruit Cocktail
Salad greens
Mayonnaise

Dissolve gelatin in 1 cup boiling water. Let chill until partially congealed, then add fruit. Pour into 6-inch ring mold and chill until firm. Serve on salad greens with mayonnaise in center. (Serves 4)

ISLES O' SPICE

¼ cup shortening
¾ cup brown sugar
¼ tsp. salt
1 egg
1 cup sifted cake flour
½ tsp. cloves
½ tsp. cinnamon
¾ tsp. soda
½ cup milk

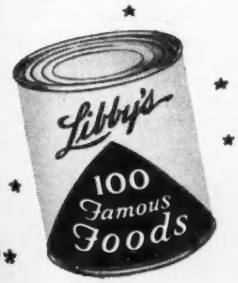
Cream shortening, sugar, and salt. Add unbeaten egg and beat until light and fluffy. Sift flour, spices, and soda together. Add dry ingredients alternately with milk, beginning and ending with the dry ingredients. Fill greased muffin pans ⅔ full. Bake in a moderately hot oven (375° F.) about 20 minutes. (Makes 8 to 10 cakes; only 4 are used for the dish shown here.)

This one-egg spice cake could well be featured in a cake-making lesson.

FRUIT TOPPING

4 tsp. cornstarch
3 tbsp. orange juice
1 tbsp. lemon juice
1 cup syrup drained from fruit
1 cup Libby's Fruit Cocktail

Dissolve cornstarch in orange and lemon juice. Heat fruit syrup to boiling. Add cornstarch mixture and cook until thick. Add the fruit. Serve, hot or cold, over cakes. (Serves 4). *Left-over slices of plain cake can be dressed up with this Fruit Topping. It's good for shortcakes, too.*



Libby, McNeill & Libby

LIBBY PACKS A GREATER VARIETY OF FOODS UNDER ONE LABEL THAN ANY OTHER COMPANY IN THE WORLD

nutshell is the array of goals for American farmers in 1943. Lower yields of cottonseed oil, co-product of cotton, are to be offset by increased production of other vegetable oils, notably soy bean, flaxseed and peanut.

Food Research. Ethylene, propylene and butylene gases, byproducts of petroleum, are now being used to hasten fruit ripening and growth. Ethylene and propylene stimulated speeded growth of potatoes 100% and at the same time increased the size, number, and the percentage of vitamin C. Russians have used butylene to speed the growth of trees in sections where growth season is too short to allow full maturing of the trees. Acetylene, calcium carbide, ammonia and colchicine have all been used successfully to increase the growth of fruits and vegetables.

SCIENTIFIC MONTHLY

Vol. 56, January 1943

War, famine and pestilence. P. R. Cannon.—p. 5.

BAKERS' HELPER

Vol. 79, January 30, 1943

* Amendments to food order No. 1.—p. 23.
* Food distribution order protested.—p. 27.
* Enrichment levels may be stepped up.—p. 29.
* No milk solids raise immediate.—p. 45.
* Egg drying facilities to be increased to meet demands.—p. 45.
* Making sugar replacements in cake batters and icings. W. E. Broeg.—p. 50.

Amendments. Amendment No. 1 of Food Distribution Order No. 1 was issued January 13. Changes are that dough brake is now allowed; slicing restrictions now include rolls; sale of sliced bread is limited to restaurants, institutions and commissaries; the rule that all bread must contain not less than three and not more than four parts of milk was modified to permit makers of French, Italian and Vienna bread to produce these types for 90 days without milk solids.

Milk. It is the government's hope to restrict other use of milk so all white bread can contain at least 6% milk solids or riboflavin equivalents and thus be of such high nutritive value that it would be sufficient if supplemented with a few vegetables.

Enrichment Levels. Secretary of Agriculture Wickard may be asked to step up bread to the following levels: vitamin B_1 from 1.1 to 2.2 mg., niacin from 10 to 20 mg., and iron from 8 to 16 mg.

Milk Solids. While the Department of Agriculture admits that 6% milk solids for bread is most desirable, at present only 3% milk solids can be guaranteed.

Drying Eggs. Production of dried eggs needs to be stepped up and the Department of Agriculture is scheduling meetings in several states between prospective manufacturers and Food Administration representatives.

Sugar. Lumps will form if enzyme-converted corn syrup is added to a mixture so that it comes in direct contact with powdered milk. Replacing sugar with enzyme-converted corn syrup improves texture, appearance and flavor in many frostings. In boiled frosting, it replaces regular corn syrup and up to 50% of the total sugars used. In cake filling 30 to 60% of the sugar may be replaced on the basis of from $1\frac{1}{4}$ to $1\frac{1}{2}$ parts enzyme-converted corn syrup to 1 part sugar. With cookie dough, it will replace combinations of regular corn syrup and invert sugar, pound for pound, or invert sugar alone on the basis of $1\frac{1}{4}$ parts for 1 part invert. Quantity use of this product will reduce production cost.

FOOD INDUSTRIES

Vol. 15, February 1943

* British food industry geared to war economy.—p. 51.
* Quick frozen cooked foods now in demand. C. Bowes.—p. 52.
* British food technologists improvise to meet shortages. H. B. Cronshaw.—p. 57.
* Dehydration of vegetables. . . .carrots.—p. 64.
* Army specifications for dehydrated foods.—p. 71.
* Compression of dehydrated foods will save shipping space.—p. 74.
* Brief summaries of grade standards.—p. 80.
* From the pampas.—p. 85.
* Substitute for vanilla.—p. 85.
* Fruit cereal.—p. 85.
* Cheese, macaroni standards.—p. 88.
* Production of frozen desserts restricted.—p. 89.
* Dried egg production will be increased.—p. 90.
* Cloves and ginger.—p. 92.
* Tea.—p. 92.
* Citrus juices reserved and fruit set aside.—p. 96.
* Revises tentative grades for poultry.—p. 97.
* Order restricts sales of packaged chicory.—p. 99.

Congress gets food budget.—p. 100.

British Food Industry. In England food manufacturing has been concentrated by standardization, restriction, transportation, and dehydration. Standardization has saved packing materials, manpower, and transport. The weight and shape of bread are prescribed by the Ministry of Food; bread cannot be sliced and must be wrapped at retail counters only. Manufactured food has been increased or restricted according to its nutritional value, distribution, access to raw material, processing, etc. Foods not allowed to be manufactured are table jellies, ice cream, cake, pudding and sponge mixtures, breakfast cereals, prepared breakfast foods, cured meat and bacon, meat and fish pastes, custard and blanc mange powders. The Ministry of Food has the power to control and direct all transport of food and animal feeding stuffs. Food transportation is based upon a system of zonal and transport pools. Under the zone system the country is divided into 9 sectors and except for a few neutral areas wholesalers can supply only the retailers in their sector. Dehydration has saved storage space and transportation. The Ministry of Food is now setting up 15 dehydration plants and expects to increase this number.

Quick-Frozen Cooked Foods. With the shortage of canned foods, quick-frozen cooked foods, prepared by Fainer Frozen Food Co., are becoming popular in retail and institutional markets. These foods are cooked as though they were to be served at once and then are quickly frozen. Under proper refrigeration they keep indefinitely, retaining their fresh-cooked flavor, color, and nutritional value, and the costs and selling prices are similar to those of canned foods of like quality.

Frozen Desserts. Before the manufacture of ice cream and water ices was prohibited in Britain, manufacturers kept on making products acceptable to consumers although essential ingredients were denied them. The industry pooled its technical resources through a joint war emergency committee, and recommendations for problems were distributed by mail and through technical journals. In custard ice they used a mixture of corn flour and wheat flour with a malt extract to convert the starch of wheat flour into dextrine and maltose. Goat's milk and "vegetable" milk were substituted for cow's milk. Ice cream was prepared with vegetable fat, glycerine monostearate as an emulsifying agent, and half wheat flour and half soya flour and corn or potato flour. Sugar was replaced with saccharin or a milk-flavored honey, and equal parts of sodium chloride, sodium citrate and disodium hydrogen phosphate to the extent of .05% of the total weight was used. Sodium alginate or Irish moss gave a better overrun than gelatin.

Carrot Dehydration. Beech-Nut Packing Co., Rochester, N. Y., uses a tunnel dehydrater for carrots. They are washed by water sprays, flame-peeled, washed again, in-

QUESTION: *Why do you choose canned evaporated milk for use in preparing the formulae for so many of your infants?*

ANSWER: Treatments such as homogenization and heat processing used in the production of evaporated milk alter the physical properties of the proteins so as to produce a soft curd which is easily digested by the young infant (1). Because of the uniform composition of evaporated milk, it is easy to modify the formula as may be indicated by the behavior of the individual infant (2). In addition, the ready availability in all localities, and the economy of canned evaporated milk are important factors contributing to an adequate intake of milk during infancy and later life (3).

(1) 1939. Accepted Foods and Their Nutritional Significance, Council on Foods, American Medical Association, Chicago, Illinois.

(2) 1937. American J. Digestive Disease and Nutrition, 240.

(3) 1940. Am. J. Pub. Health 30, 169.

The Seal of Acceptance denotes that the nutritional statements in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

AMERICAN CAN COMPANY • 230 Park Avenue, New York, N. Y.

spected and trimmed, washed another time, diced, weighed, and blanched for 6 min. at 240° F. In the center-exhaust tunnel of the dehydrater, dehydration down to around 7% residual moisture is accomplished in about 4.5 hours, and afterwards in the equalizing bins final dehydration to below 6% final moisture is accomplished by 18 to 24 hours exposure to a slow current of low-humidity air at 135° F. After final inspection, carrots are placed in 5-gal. tins, the air is exhausted, the tin filled with inert gas, and the lid affixed in a double seam.

Dehydrated Soup. A list of Army requirements for dehydrated soup mixtures appears in *Food Industries* for February 1943.

Compression of Dehydrated Foods. The Auto Ordnance Co., Greenwich, Connecticut, uses a compression process on dehydrated foods which reduces their bulk from 30 to 80% depending upon the food. The dehydrated material is quick-frozen before compression and is held at freezing temperatures during compression to prevent the fat globules in the food from breaking down during pressing. Compression not only saves space, but also improves keeping qualities and reduces oxidation.

Grade Standards. Government grades for frozen snap beans are: U. S. Grade A or Fancy, Grade B or Extra Standard, and Off-Grade. The various sizes of frozen snap beans are as follows: No. 1—12/64 to 14½/64 in. in diameter. No. 2—14½/64 to 18½/64. No. 3—18½/64 to 21/64 in. No. 4—21/64 to 24/64 in. No. 5—24/64 in. or larger. The color score ranges from 17 to 20, which means a uniform, typical color, to 0 to 13, which means variable, off color. The defect score is from 34 to 40 points, meaning practically free from defects, down to 0 to 27 points, meaning off-grade. Character and maturity is rated from 34 to 40, which means tender and fleshy, to 0 to 27, which is off-grade.

"B.V." Beef Extract. Wilson and Co., Chicago, is packing a "B.V." beef extract, a product of Argentina, containing beef extract, water, salt, soup stock, flavorings, and spice, which can be used as a base for soups, as flavoring for gravies or meats, or as a drink when mixed with hot water.

Vanilla Substitute. Imitation vanilla tablets, composed of lactose, corn starch, vanillin, and coumarin, are used in the Army's cakes, pastries, and puddings. Each tablet weighs 5 grains and is the equivalent of one teaspoon vanilla extract.

Fruit Cereal. American Dietaids Co., Inc., Yonkers, New York, has a cereal-like mixture, "Sunlets," combining wheat germ, soy bean, oat flour, flaxseed, raisins, apples, prunes, dates, brown sugar, vegetable shortening, salt and vitamin B_1. It is recommended for children as a source of caloric energy.

Standards. Standards of identity for cream cheese, Neufchatel, cottage, and creamed cottage cheese were made known, effective March 23, 1943. Standards for macaroni and noodle products have been proposed, but no action taken.

Frozen Desserts. Order No. 8, effective February 1, restricts the use of milk and milk products for civilian consumption to 65% of the quantities consumed from December 1, 1941 to November 30, 1942.

Dried Eggs. Increased production of dried eggs to meet wartime requirements is desired by the Food Distribution Administration. Although normal output has increased 40-fold since 1941, present production will fall short of total requirements.

Cloves and Ginger. The supply of cloves and ginger has increased due to improvement in imports.

Tea. An amendment to Order M-111, issued January 7, restricts existing inventories of tea and sets up quota periods of the sale of the commodity. Under the quotas no packer or wholesale receiver may accept or deliver more tea during the determined period than his total quota for that period.

Citrus Juices and Fruit. Food Administrator Wickard has ordered the entire production of citrus juices, except unconcentrated grapefruit juice, reserved for direct war requirements, and specified quantities of citrus fruit may be required to be set aside for processing.

Poultry Grades. Standards for grades for dressed chickens have been established by the Food Distribution Administration: U. S. Grade AA, Grade A, Grade B, and Grade C.

Chicory. Food Distribution Order No. 5 restricts the sale and delivery of packaged chicory, and the greater part of the chicory production must continue to be sold in bulk for customary coffee blending purposes.

HORWATH HOTEL ACCOUNTANT

Vol. 23, February 1943

* The trend of business in hotels.—p. 3.

Hotel Business Trend. The year 1942 was a good one for the hotel business. Total sales of rooms and restaurants increased 15% during the year and room occupancy stood at 73%, highest annual figure since 1931 when comparative records were started. Room rates went up 4% since 1941 and the total cost per dollar sale of food and beverages rose 1%.

HOTEL MONTHLY

Vol. 51, January 1943

* The answer to the meat cutting problem.—p. 32.
Coffee shop waitresses find answer to wartime hosiery problem. C. Boyer. —p. 34.

Meat Cutting. Representatives of meat purveyors all over the United States met to interpret and implement the new OPA ruling on beef cutting and sales. One point stressed was the necessity for getting maximum yield from every carcass. Careless cutting can alter the yield as much as 10%. Cutting short ribs separately from the rib roast makes it possible for an operator who uses only a few ribs at once to get enough short ribs at any time without accumulating them from day to day. Portion costs can be accurately controlled by cutting steaks and chops on a Jim Vaughan band saw into 8 or 10-oz. pieces. Unless the purveyor of meals to the general public can match this skill he will do well to purchase as much meat as possible, cut, ready for cooking.

ICE CREAM TRADE JOURNAL

Vol. 39, January 1943

* Ice cream industry may freeze foods—p. 10.

Ice Cream Industry May Freeze Foods. Since the production of frozen milk desserts has been curtailed due to butterfat and serum solids shortages, the ice cream industry may use its facilities to freeze, distribute and sell frozen foods to help feed wartime America and to help keep its dealer organizations intact. In conjunction with the U. S. Department of Agriculture, surveys of freezing facilities and capacities of ice cream plants and retailers' equipment for partial diversion to freeze the large crops of fruits and vegetables anticipated this year have been made and found "quite practicable." The potential volume of such products depends upon the amount of refrigerated storage space available for holding frozen products from summer and fall production period for winter consumption and the arrangements which can be made between ice cream manufacturers and canners for use of the surplus.

Are "Butter Fingers" costing you money?

HERE'S A PROVED WAY TO CUT TUMBLER BREAKAGE BY MORE THAN 50%

IF tumbler breakage by bus boys, dishwashers and customers puts a big dent in your profits, you needn't just take it as an expected business cost and let it go at that. For Corning's Double-Tough Tumblers are made to solve that problem for you. These glasses are made to take an amazing amount of mechanical shock—at least twice as much as ordinary tumblers of equal thickness.

Experience has proved them better than even our expectations. Some users report that their Double-Tough Tumblers are lasting as much as ten times as long as tumblers they previously used. So why put up with all the cost, inconvenience and danger of tumbler breakage when these extra-strength tumblers can be had? Especially when they have the same clearness, brilliance and light-weight appearance as regular quality tumblers.

Double-Tough Tumblers are money-savers — and trouble-savers, too. If you haven't tried them, why not put in a test order now? Prove for yourself how much longer they'll last. Types and sizes for every need. See your nearest distributor, or write directly to Macbeth-Evans Division, Corning Glass Works, Charleroi, Penna.

Drug Company reports successful test

"To make a fair test we experimented with the Double-Tough Tumblers in two of our stores for over two months. Then we compared the breakage of Double-Tough Tumblers with those we were using, and found that there were twenty of our tumblers broken for every one Double-Tough Tumbler.

"We found that, by using a tumbler such as this one, we have been able to definitely improve fountain and luncheon service."

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THE TUMBLER THAT HAS TWO LIVES!

LOOK FOR THIS TRADE-MARK!
It appears on the bottom of every Double-Tough Tumbler . . . the famous Corning mark that means high quality!

CORNING *means* Research in Glass

Corning double-tough *Tumblers*

Nutrition Division, Office of Defense Health and Welfare Services, Transferred to Food Distribution Administration, Department of Agriculture

Under Executive Order 9310 issued March 6 by the President, the Nutrition Division of the Office of Defense Health and Welfare Services was transferred to the Food Distribution Administration of the Department of Agriculture, according to a release from the Office of War Information, Department of Agriculture, dated March 24 and received March 26. This order makes effective a recommendation to the President submitted jointly by Secretary Wickard and Paul V. McNutt, director of the Office of Defense Health and Welfare Services, emphasizing the need for correlating the National Nutrition Program with the over-all food program.

The Nutrition Division will be the nucleus of a Nutrition and Food Conservation Branch of the Food Distribution Administration, which will attempt to align every kitchen in the nation with the war food program. This program will be conducted primarily through the hundreds of state and local committees which have been cooperating with the former Nutrition Division.

The aim of the program is to make the best possible use of the wartime civilian food supply through proper conservation and applied nutritional knowledge. Special emphasis will continue on health factors related to nutrition and on the importance of adequate nutrition of industrial workers as a factor contributing toward the greater production of war materials. Close cooperation will be maintained with the food industries and other groups interested in advancing the National Nutrition Program. A broad food conservation program and advisory service to consumers also will be conducted.

Secretary Wickard emphasized that the Department of Agriculture is now organized to represent all phases of civilian requirements in the war food program. Nutrition and food research of the department is being expanded to meet wartime needs through the Bureau of Human Nutrition and Home Economics, a reorganization of the Bureau of Home Economics announced last month. The work of this bureau will provide the basis for the educational work of the FDA, which also will cooperate with the Extension Service, Office of Civilian Defense, Public Health Service, Office of Education, and other national organizations, both governmental and nongovernmental. Transfer of the Nutrition Division of ODHWS to the Food Distribution Administration rounds out organization of the civilian branches of the FDA.

Chief of the Nutrition and Food Conservation Branch is M. L. Wilson, director of the Agricultural Extension Service. Dr. W. H. Sebrell, of the Public Health Service, is associate chief. Mr. Wilson and Dr. Sebrell have directed the National Nutrition Program under the ODHWS.

Civilians are represented in the Food Distribution Administration by two other branches in addition to the Nutrition and Food Conservation Branch, all three being under J. S. Russell, deputy director of FDA.

A Civilian Food Requirements Branch, under Dr. Russell M. Wilder, determines civilian food needs and represents civilians when the allocations of food supplies are recommended, in the determination of rationing policies, and also in the formulation of food orders and regulations. This branch studies and reports on the adequacy of existing supplies, both as to amounts and nutritional requirements. In determining proper distribution, it considers the needs of groups that have special nutritional requirements.

The third branch is the Civilian Programs Branch which is headed by C. F. Kunkel. This branch provides supplemental foods for children through the School Lunch Program, and also will be in charge of other public food programs that may become necessary.

Travel's not the only thing that's broadening!

Right at home today—with shortages pulling food habits out of ruts—new millions are discovering NUCOA, the nourishing modern margarine with VITAMIN A!

• Yes—sampling new foods is one of the pleasures of travel. Yet how hidebound most people get in home food habits! Today, many are tasting NUCOA for the first time. And surprising themselves with a new treat! "Why haven't I tried this delicious Nucoa before?" they are saying. "I didn't know margarine could be so *good!*"

No News to Food Scientists!

The deliciousness and nutritional value of Nucoa are not news to trained nutritionists, who know that Nucoa has been the leader in margarine's wonderful scientific development during the last dozen years. Though Nucoa furnishes the same amount of food-energy as butter (3,300 calories per pound) . . . is equally digestible (over 96%) . . . and serves the menu in the same capacities as butter, Nucoa has qualities which butter does not duplicate.

Dependable year-round VITAMIN A value. Never less than 9,000 VITAMIN A units in every pound of NUCOA! For Nucoa is fortified under laboratory test and control which *guarantee* this amount winter and summer.

Uniform flavor and texture. NUCOA's chief ingredients—pure vegetable oils churned in fresh pasteurized skim milk—come from American farms exclusively. And the delicious cultured-milk flavor of Nucoa . . . its evenly smooth texture . . . are *always the same,* for every step of processing is *controlled.* 102 tests daily assure this invariable quality.

Uniformly sweet and fresh. NUCOA is freshly made the year around. *There is no storage Nucoa!* Its fresh taste—every pound the same—and fine keeping quality put Nucoa in the gourmet class. Yet Nucoa is inexpensive.

NOTE: New users of Nucoa quickly become steady customers. Nucoa has always been America's most popular margarine. Today the demand is so great that you may not always be able to get Nucoa on the day, or in the quantity, you want. The makers of Nucoa regret your disappointment. They are trying hard to make the supply go around.

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News Notes

American Dietetic Association Annual Meeting. The twenty-sixth annual meeting will be held at the Hotel William Penn, Pittsburgh, October 19–22 inclusive. This time, from Tuesday to Friday, inclusive, was selected by the Executive Board in order to avoid week-end travel and thus lessen the burden on peak transportation. As at the 1942 session, the program will be devoted chiefly to many small meetings at which the numerous practical and pressing problems arising because of the exigencies of war will be discussed.

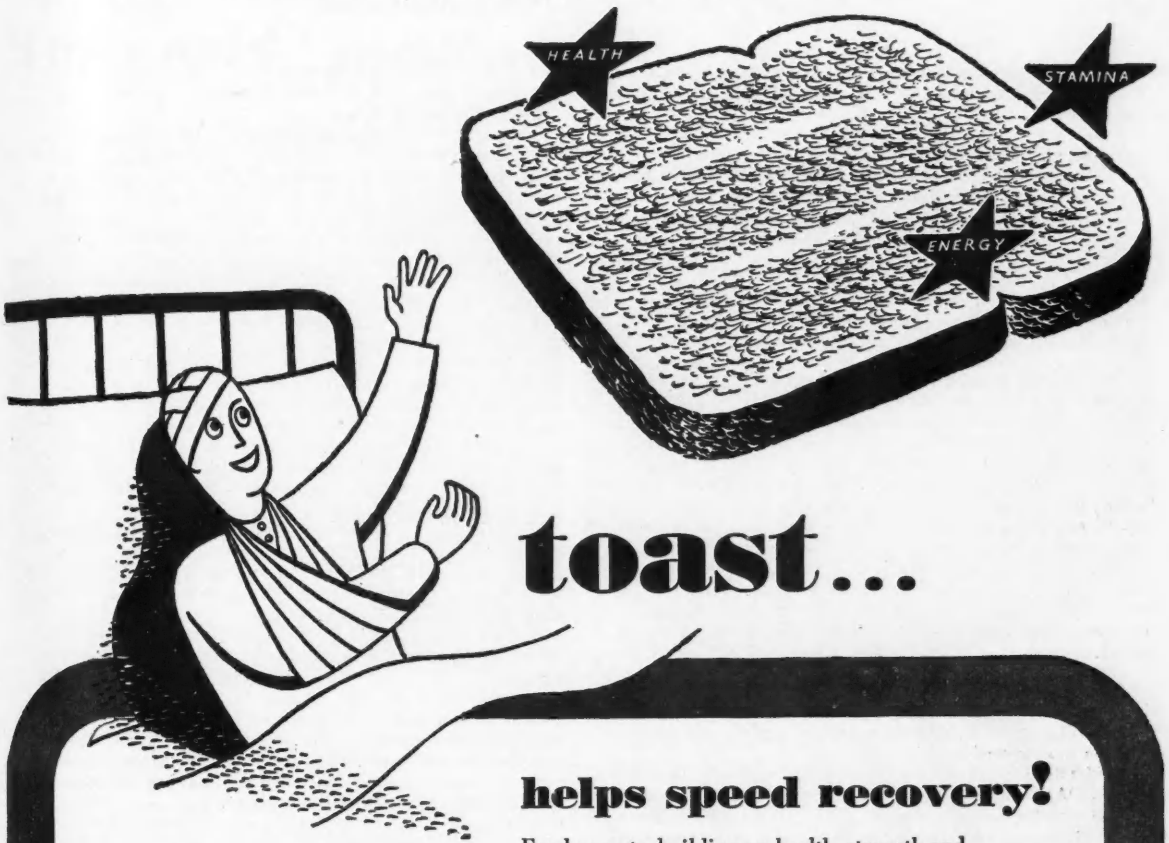
Midyear Meeting, Executive Board, American Dietetic Association. All members and ex-officio members, with the exception of the Treasurer, were present at the February 19–20 sessions of the Board, Drake Hotel, Chicago. The Secretary reported a total membership of 5703; 515 applicants having been accepted for active membership from September 1, 1942, to February 18, 1943. During this period none were dropped, there were 2 deaths, and 85 resignations in good standing. The Educational Director reported that 12 or more new training courses for student dietitians were being discussed, developments in the accelerated training program, and establishment of special short training courses in the industrial field for qualified persons. The Director of the Placement Bureau announced that approximately 400 openings are listed at present, the demand concentrated largely on dietitians competent to direct food services in industry and teaching dietitians qualified to instruct nurses. Nelda Ross, as chairman of War Activities, presented a tentative plan for the training of "nutrition aides," which was approved by the Board with the proviso that the term "dietitian aide" be substituted for "nutrition aide." It is understood that the plan awaits the action of the American Red Cross and if accepted, its promotion will correspond to that now in effect with regard to nurses' aides. In other words, the training and supervision of the "dietitian aide" will be directed by qualified graduate dietitians. A recommendation of the Finance Committee, that membership dues of dietitians in foreign service be suspended for the duration of such service, was approved. The report of Anna M. Tracy, chairman of the Organization Committee, was discussed by the Board who referred to the chairman of Revisions a recommendation that the title of the Diet Therapy Section be changed to "Nutrition Section." Authorization was given to move the Executive Office of the Association to 620 No. Michigan Avenue, Chicago, effective early in April.

Mary A. Lindsley Receives Red Cross Appointment. Miss Lindsley, who served as a dietitian in World War I, and who was one of the first dietitians to engage successfully in the operation of a hotel and other large-scale feeding operations, on January 20 accepted an appointment as member of the Nutrition Service Staff of the Red Cross for a special assignment in "Services to The Armed Forces." Miss Lindsley will train the Red Cross Overseas Club directors and assistant directors in household management, food management, and housekeeping services.

ARC Discontinues Enrollment of Medical Technologists. Under date of February 25, Mrs. Laura S. diZerega, Acting Director, Enrollment of Medical Technologists, American Red Cross, Washington, informed the headquarters office of the American Dietetic Association that the Office of the Surgeon General of the Army had requested the American Red Cross to discontinue the enrollment of medical technologists. Mrs. diZerega added that dietitians interested in Army service may make application to Major Helen C. Burns, Services of Supply, Office of the Surgeon General, Washington. She also expressed her appreciation for the cooperation of the headquarters office staff of the Association in making available to the Red Cross the membership list of the Association in efforts of the Red Cross to render service to the Army.

Dietitians Urgently Needed. Under the list of persons "urgently needed" for war work in civil service positions, in the February 17 issue of *Victory*, are "staff dietitians—persons with appropriate college study in dietetics who have completed an approved graduate training course as student dietitian, or who have had equivalent experience." Under "newly announced" positions is one for "junior professional assistants—college graduates, women especially, with major study in any field." The use of the term "junior professional assistant" is noteworthy, since it appears to indicate a modification with regard to the "subprofessional rating" under which the majority of technically and scientifically trained women heretofore were listed.

Graduate Course in Public Health Nutrition. The School of Home Economics, Simmons College, Boston, announces a graduate program in nutrition, planned especially to prepare students for nutrition work in public health and social welfare agencies. Both graduate study and supervised field experience are included. The program, which is made possible through the cooperation of the Harvard School of Public Health and the Simmons School of Social Work, is designed to enable the student to meet the minimum qualifications for nutritionists as adopted by the American Dietetic Association, the American Home Economics Association, and the American Public Health Association. Requirement for admission is a bachelor's degree in home economics with a major in foods and nutrition, or its equivalent. College work should have included basic courses in chemistry (inorganic, organic and physiological), physiology, bacteriology, economics, sociology, psychology and methods of teaching, as well as the foods and nutrition courses required for a major in this field. It is desirable that the candidate have had some experience, preferably as nutritionist, dietitian, research worker in human nutrition, or as a teacher of nutrition. The program leading to the master's degree includes a minimum of 32 semester hours of graduate study and the equivalent of 8 semester hours of supervised field experience. The total program covers a period of 11 months. One-half day per



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MODELS FOR EVERY USE . . . *Both gas and all-electric in sizes to suit every need from the smallest diet kitchen to the largest army cafeteria.*

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CONSTRUCTION . . . *Built sturdily and attractively, yet with a minimum of critical materials.*

Model CT-4, all-electric, 540 to 720 slices per hr.

week during the first semester and one and one-half days during the second semester will be devoted to field work. An interneship in one of the community agencies during two months of the summer following the year of study is required and also a comprehensive written report of some special aspect of the work. In planning the individual programs for both study and field experience consideration will be given to the previous preparation, experience and interests of the students. At the conclusion of the year's work each student will demonstrate her ability and competence in this field through comprehensive written and oral examinations. Since enrollment is limited by the opportunities available for suitable field experience, those interested are urged to make early application.

Student Nurse Corps. A proposal for a Victory Student Nurse Corps has been submitted to Federal Security Administrator McNutt by the Health and Medical Committee, Office of Defense Health and Welfare Services, as a means of reaching the recently announced quota of 65,000 student nurses. Tentative provisions of the plan include a distinctive insignia, maintenance, and stipends for students, and utilization of a portion of senior students in military and other government hospitals, under the administration of the U. S. Public Health Service. After graduation, nurses would enter the armed forces with full rank and pay of Second Lieutenant or Ensign, or would be assigned to government or civilian nursing services essential to the war effort.

The National Food Situation. Following is a summary of important releases, during the period February 1–March 5, from OWI and the U. S. Department of Agriculture, affecting the food situation:

Under date of February 6: Amendment to Food Distribution (FDA) Order 10 provided for equitable distribution of rice stocks for civilian consumption. The original order directed rice millers to set aside 60 per cent of their stocks for purchase by government agencies for shipment to American territories where rice is a staple food and for United States military needs.

February 9: Food Distribution Order 19, superseding WPB Order M-127, assured equitable distribution of spices to consumers through control of distribution to packers, industrial users and wholesalers, based on quarterly percentages of 1941 deliveries. USDA reported total food deliveries to allies in 1942 of 5,730,000,000 lb. representing less than 6 per cent of total United States food supply in that year. (About 76 per cent of total was for the British, 23 per cent for the Russians; meats represented 20 per cent of total, dairy products and eggs 17 per cent, and fats and oils, fruit, vegetables and grain products made up the balance.) Labor recruitment program was announced to help assure farmers of help at planting and harvesting times, under the direction of county agricultural agents of the Extension Service in cooperation with the U. S. Employment Service, OCD, and local organizations, and with the aid of an intensified educational campaign on the farms in production skills and labor management. Goal of 18 million Victory Gardens was set for 1943 by USDA.

February 10: Peanuts, whether grown for edible trade or for oil, were given price support, as incentive to growers. USDA reported relatively large amounts of sauerkraut available to consumers this year, in bulk form.

February 11: FDA Order 20 ruled that federally inspected packers were required to reserve 50 per cent of weekly lard production for FDA purchase. (Despite this order, OWI states that civilian supplies of lard during 1943 will be increased slightly over amounts available in 1942.)

February 14: Housewives were warned that transferring commercially canned foods into glass jars is a dangerous practice that may result in food poisoning.

February 15: FDA Order 15 ruled that Cheddar cheese manufacturers should set aside 50 per cent of production for "direct war purposes."

February 16: Reports on perishable food items held in cold storage warehouses and meat-packing plants February 1 showed only four items having heavier stocks than were on hand a year earlier: namely, fresh apples and pears, frozen fruits and frozen vegetables. Creamery butter, cheese, shell and frozen eggs, frozen poultry, frozen and cured beef, and pork, lard, and rendered pork were considerably lower.

February 19: According to FDA Order 22, greater percentages of grapefruit, orange and pineapple juice, beets and carrots, and smaller percentages of apricots, fruit cocktail, peaches and pears, asparagus, Lima and snap beans, corn, and tomatoes were ordered set aside by producers for government purchase. By FDA Order 23, salmon canners were permitted to sell to wholesalers for civilian distribution the remaining 20 per cent, about 50 million pounds, of their 1942 pack (60 per cent was previously set aside for government purchase, and 20 per cent for civilians). OPA announced regulations for registration of institutional users of rationed foods.

February 20: OPA added dry beans, dry peas, lentils, and dehydrated and dry soups to list of rationed foods.

February 21: FDA Order 24 removed restrictions on amounts of canned fruits, vegetables, and juices that wholesalers may distribute to retailers.

February 23: Secretary Wickard suspended wheat marketing quotas in new move to ensure adequate food and feed supplies for the war effort, releasing thereby any wheat which has been stored off the market because of the quota. Twelve tea importers were named by FDA as "qualified distributors" to handle the distribution of all tea imports into the United States. OPA froze prices of fresh carrots, cabbage, wax and green snap beans, tomatoes and peas at level of prices for week of February 14.

During the week of February 11, specific dollars and cents maximum prices were set for butter at every stage of distribution from creamery to grocer. At the same time, an increase of 3 cents a pound for so-called foreign types of domestic cheese was allowed. Secretary Wickard announced in February that meat and meat products from South America, purchased by the British Ministry of Food this y ar, may be allotted to the United States as well as to the United Kingdom, Canada, Australia, New Zealand, South Africa and India, the meat so obtained to be used by the United States armed forces.

February 24: Secretary Wickard urged complete conversion of agriculture to full war basis by financial aid to farmers and rewards for producing more needed crops in place of those they have been accustomed to growing or which they think are more profitable.

February 25: Farmers were asked by the Department to increase acreage goals for certain "more nutritive vegetables" including carrots, kale, snap beans, Lima beans, beets, sweet corn, tomatoes, cabbage, onions, spinach and green peas.

On the same date Secretary Wickard stated at a press conference: "The food supply situation today warrants neither complacence nor hysteria. I have told the American people numerous times in recent months that there is going to be enough food for essential diets in this country, provided we manage our food supplies wisely. I repeat that statement today.

"On the basis of present indications, the fighting front requirements of military and Lend-Lease use for the various groups of food in 1943 will take the following percentages of our total output: 20 to 25 per cent of the beef (virtually all of which is for American armed forces); 30 to 35 per cent of pork; 25 to 30 per cent of eggs; 15 to 20 per cent of butter; 40 to 45 per cent of cheese; 40 to 45 per cent of condensed and

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Brer Rabbit Milk Shake* is a fine suggestion for those who do not normally like milk, and those who do not drink enough milk.

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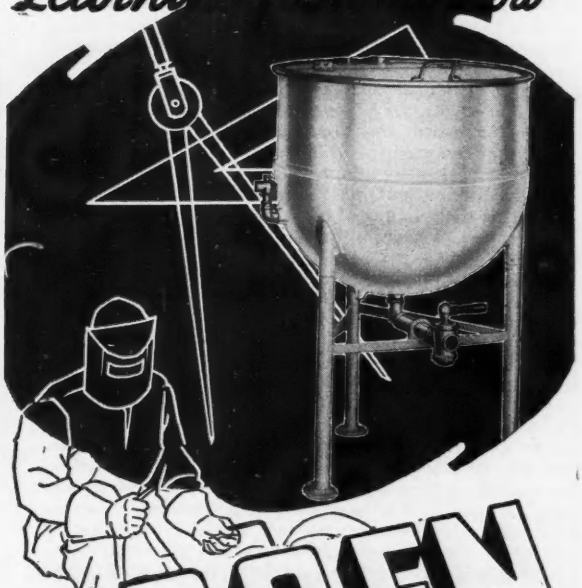

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TODAY we are working tooth and nail for Uncle Sam . . . and it's a job that takes just about all of our time all the time. So, we don't have much chance to think about tomorrow. But . . . in this unrelenting maelstrom of wartime production, we are learning more about kettle fabrication every day . . . and, perhaps more important, about the fundamental characteristics of the whole category of today's known metals. ● Thus, we are storing up a vast reservoir of knowledge, skill and versatility. From it, when peace comes, you can draw authoritative and impartial counsel on the correct type of kettle in the correct choice of metal —be it monel, stainless steel, aluminum or alloys—best suited to your individual purpose . . . and from it you can be certain of the same high efficiency now so satisfactorily serving America.

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evaporated milk; 25 to 30 per cent of lard; 20 to 25 per cent of other edible fats and oils; 50 to 60 per cent of canned fruits; 35 to 45 per cent of dried fruits; 45 to 50 per cent of canned vegetables; 10 to 15 per cent of wheat; and 15 to 20 per cent of rice.

"From any angle, the wartime management of food is not an easy task. The food supply for average Americans has been so abundant that any restriction upon their purchases is a new and unpleasant experience."

March 1: Point rationing of canned and processed foods went into effect. OPA General Ration Order 5 (Food Rationing for Institutional Users) under this date described in detail the three group plans, how rations are computed, and gave other pertinent information.

Food Distribution Order 25 succeeded WPB Order M-145, regulating the grinding of cocoa beans and restricting the manufacture of chocolate novelty items and other cocoa products. In Order 25.1, quotas of cocoa beans that may be used for processing, as under the WPB Order, are fixed for each quarter at 60 per cent of amount processed during the corresponding period of 1941.

March 3: USDA reported January purchases of food and non-foodstuffs by FDA for Lend-Lease, Territorial Emergency programs, Red Cross, and domestic food programs amounted to $175,000,000, compared with $152,000,000 in December, primarily reflecting larger acquirements of grain products, dried eggs, and cotton. Meat purchases represented a decline of 30 per cent compared with December, accounted for mainly by smaller procurements of canned and dried pork. (Purchases for the Russian Army, however of the canned, spiced pork product, *Tushonka*, aggregating 23 million pounds, were larger than in any previous month, also flour purchases for the Russian Army were about twice as large as the annual flour exports of Europe in prewar years.) Decreases in lard and oleomargarine purchases were offset by larger acquirements of cottonseed, linseed and other oils.

March 5: Three-point meat management program designed to prevent black market operations, obtain adequate supplies for direct war needs, and secure necessary control over the supply of meat so that it can be fairly distributed, was announced by Secretary Wickard as follows: (1) all live stock slaughterers who sell meat, including farmers and local butchers, to operate under a slaughter permit system and, as an aid to enforcement, to stamp their permit number at least once on each wholesale cut; (2) all live stock dealers to obtain permits to buy and sell live stock and to keep complete records of their operations (with exception of farmers who must keep records of purchases and sales); (3) all slaughterers operating under federal inspection to set aside for war uses designated percentages of their production. Secretary Wickard called upon live stock producers, packers, dealers, health authorities, local law-enforcement officials, and consumers to help in eliminating the illegal slaughtering, selling, and distribution of meats. The Secretary further stated that responsible citizens will be asked to form city and town meat committees to aid in the administration of the program. A list of all permits issued by the County USDA War Boards will be forwarded to the Administrator of the order through the State War Boards. Whenever the County Boards believe a violation of the slaughter permit is occurring, a full report will be made and forwarded in the same manner. All investigations of alleged violations will be made by the Compliance Branch of the Food Distribution Administration.

Through enforcement of the permit provisions, black market operators will be cut off from their live stock supplies. With every wholesale cut of meat sold in the retail market plainly stamped with the slaughter permit number (the number must be at least one-fourth inch high and preceded by the letter "P," all in deep purple color), no illegal meat can be placed in the butchers' coolers or showcases without being readily spotted. The new permit order also is designed to curb the increase in sale of contaminated meat or meat from diseased animals. It is explained that cattle, hogs, and lambs handled illegally do not receive the same sanitary care as animals that go through legitimate channels. Furthermore, there has been little or no interest among the "meat-leggers" as to whether animals they slaughter are healthy or their meat is clean. Under the order, specific standards for sanitary slaughter facilities are set up for local butchers and packers whose meat is not federally, state, county, or city inspected. Under the Meat Restriction Order, effective October 1, 1942, the quotas of beef, pork, veal, mutton, and lamb that could be distributed for civilian use were specified by three-month periods. According to the release, at the present time a small packer, local butcher, or farmer who sells more meat to civilians than he did in the same quarter of 1941 is violating his quota and operating a black market. Similarly, whenever a large packer sells more to civilians than the quota allotted to him, he is operating a black market. Since nearly all black market operators sell their meat above ceiling prices, they are always ready to outbid legitimate butchers and meat packers for live animals.

Miscellaneous OPA rulings during the week of February 21–27 include: OPA-1757, providing that food rationing in War Relocation Centers and alien detention camps will be administered from Washington; OPA-1768, setting cents-per-dozen maximum egg prices; OPA-1764, allowing 5 lb. sugar on stamp 12, valid March 16–May 31; OPA-1791, controlling price of rabbit meat; OPA-1784, bringing baby foods sold by druggists under point rationing program; OPA-1799, setting ceiling prices on lettuce, spinach, at highest prices at which individual sellers did business during five days ending Wednesday February 24; OPA-1786, setting prices of peanuts.

Copies of government releases covering any of the above rulings may be obtained from the U. S. Information Center, 1400 Pennsylvania Avenue, NW, Washington, D. C.

Helen S. Mitchell Receives Appointment. According to information received March 17, the services of Dr. Mitchell have been requested by the Office of Foreign Relief and Rehabilitation in the State Department, which is headed by former New York State governor, Herbert H. Lehman. Dr. Mitchell will be in charge of the Nutrition and New Foods Section.

Nation's Eating Habits. A recent survey conducted by the American Institute of Public Opinion attempted to discover how representative adults in all states were observing the rules for good diet as laid down by nutrition experts. Results showed that 45 per cent ate no fruits or raw greens in a 24-hour period; 48 per cent, no eggs; 34 per cent, no milk or cheese; 25 per cent, no leafy green or yellow vegetables; 8 per cent, no other vegetables or fruit; and 3 per cent, no whole-grain or enriched cereals or bread. Breaking this down into sections, those who lived in the South showed a greater tendency to ignore the rule regarding consumption of citrus fruit and raw greens, while those in the New England and Middle Atlantic area showed greatest deficiency of all sections in consumption of milk and milk products. It is suggested that wartime shortages of food as well as rationing and high prices are factors which affect the percentages found in the survey.

Cost of Living and Food Consumption. According to figures released by the Bureau of Agricultural Economics, U. S. Department of Agriculture, the rise in food costs continued steadily during 1942 but the price control placed on most foods has tended to slow down the rate of increase. Uncontrolled items rose sharply during the latter half of

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Silver rolled gold plate, green enameled rim	2.00
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Not only plain muffins, but also spiced, pineapple, blueberry, and other tasty variants! Each finished plain muffin contains only 1 gram carbohydrate, 3 grams protein, and 3 grams fat.

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1942, but some of these were partly seasonal in nature, according to the report. The Bureau of Labor Statistics' index of retail food costs showed an increase of about 14 per cent or slightly over 1 per cent per month. Under the General Maximum Price Regulation, approximately 60 per cent of the total family food bill was made subject to maximum price controls. At the present time about 89 per cent is subject to regulation. In addition to the "visible" increases in the cost of food, "invisible" and indirect increases which took place throughout the year also cut into the purchasing power of the consumer's dollar.

It is estimated that consumers' spendable income in 1943 probably will be 10 to 15 per cent larger than in 1942 and that the decline in the quantity of durable goods available for civilians in 1943 will release more money for food purchases, making rationing of additional scarce foods necessary. It is stated that with an equitable distribution of the food supply either through rationing or "voluntary sharing," the average diet (with the possible exception of calcium and riboflavin) can meet the nutritional standards recommended by the National Research Council, provided maximum utilization is made of existing supplies.

Based on production goals, and present conditions and indications, the "apparent civilian consumption" of various food items for 1943, according to the Bureau of Agricultural Economics, will be: meat 98 per cent of 1942 average, fish 82, eggs 96, chickens 129, butter 80, ice cream 65, cheese 75, canned milk 82, fluid milk 107, dried skim milk 73, fats and oils 109, fresh fruits other than citrus and apples 100, citrus fruits 98, canned fruits 46, canned juices 76, frozen fruits 100, dried fruits 94, leafy green and yellow vegetables 83, tomatoes 97, vegetables other than leafy green and yellow and tomatoes 88, canned vegetables 65, potatoes 104, sweet potatoes 126, sugar 71, wheat 105, rice 87, corn 99, oats 103, coffee 71, cocoa 82. Translated in terms of pounds per year, the consumption per capita estimated for 1943 for certain of these foods and a few others is: meat 138.3, fresh fish 7.3, canned fish 1.8, eggs 38.2, chickens 29.4, butter 12.8, cheese 4.8, canned milk 16.1, dried skim milk 1.6, fluid milk and cream 408.3, ice cream 10, fats and oils 36.3, fruits other than citrus and apples 45.2, citrus fruits 66.4, canned fruits 6.8, canned fruit juices 5.9, frozen fruits 1.6, dried fruits 5, leafy green and yellow vegetables 69.6, tomatoes 25.8, melons 27.6, other vegetables 57.2, canned vegetables 23.9, potatoes 129.2, sweet potatoes 26.9, dry beans 7.3, sugar 62.2, wheat 231.6, coffee 9.6, tea .2, cocoa 3.2.

Fluid Milk Prices in City Markets is the title of a February 16 release from the U. S. Department of Agriculture which gives data on the February prices of fluid milk in city markets all over the United States and the average buying prices of milk for city distribution in the various geographical sections of the country.

Modifying the Nutrition Program in Accordance With Present Needs. According to the *Food Field Reporter*, March 1, the plan for carrying on the National Nutrition Program this year was worked out by leading advertising men with the following purposes: (1) to continue general education on nutrition, (2) to show consumers how to buy and plan nutritious meals despite severe wartime restrictions, and (3) to encourage acceptance by industry of high nutritional standards for war workers. The Grocery Manufacturers Association participated actively in the project directed by a "task force" named by the Advertising Council, a nonprofit organization of advertising executives formed about a year ago to cooperate with the Office of War Information and other government bureaus. Since the mechanics of the National Nutrition Program were originally based on an abundance of all sorts of foods, the Advertising Council set itself the task of discovering how the advertising of this program could be revised in certain fundamental respects to harmonize with conditions of scarcity.

Essentials of the new plan have been incorporated in a campaign book for the National Nutrition Program released by OWI and ODHWS and received at the JOURNAL office March 10, entitled "Better Health—A Speedier Victory Through Proper Nutrition." They include: (1) A revised Official Food Chart with the heading "U. S. Needs Us Strong—Eat the Basic 7 Every Day; for Health—Eat Some Food From Each Group Every Day," and listing meat, poultry, fish, and eggs in one group instead of two (other groups remain the same). (2) Instructions to housewives on planning and marketing under the rationing restrictions, with emphasis on filling the nutrition requirements of the family. (3) Instructions on avoiding food waste. (4) Wartime food demonstrations. (5) Nutrition in industry program through a new Nutrition in Industry Section of ODHWS, members of which will act as assistants to each of the twelve regional nutritionists. "Copy keynotes" suggest emphases for advertisers, the press, and nutrition workers. An appendix to the campaign book contains material on the following subjects: "The Dietary Situation in the United States"; "The Food Elements You Need—Why You Need Each of Them—in What Foods You Can Get Them"; "Practical Evidence of What Proper Nutrition Does to Industrial Production and General Efficiency"; "Wartime Food Demonstrations—What They Are and What's Involved in Them"; "Conserving the Food You Buy"; and "The Nutrition in Industry Section of the Nutrition Program." On March 19 campaign a booklet entitled "Information Program for the Rationing of Meat and Fats," prepared by the Campaigns Branch, Office of Information, OPA, in cooperation with USDA and OWI, was received from Calla Van Syckle, Consumer Division, OPA. The material contained therein should be helpful to those who must address the public on the subject.

Need of Tin Cans and Fats. WPB Chairman Donald M. Nelson has called for an expanded and more vigorous collection of tin cans in the Southwest for use by the copper industry, according to an announcement quoted in *Victory*, February 17. Cans are needed in large quantities to fill the capacities of the shredding plants in Los Angeles, Kansas City, Dallas, and Houston. In the rest of the country, can collection should be carried forward on the existing basis to fill capacities of existing plants. OWI at the same time stated that failure to collect waste fats has forced the United States to "dig into" its reserves of glycerine at a rate that eventually will exhaust supplies.

Food and Nutrition Research for Armed Forces. Secretary of Agriculture Wickard announced February 7 that cooperative arrangements had been completed whereby basic food research needed by the Quartermaster Corps of the Army, and the Bureau of Supplies and Accounts of the Navy, will be conducted by the Agricultural Research Administration, already responsible for research work on food and nutrition in the Department of Agriculture. Two consulting committees were appointed, in collaboration with the Quartermaster Corps and the Bureau of Supplies and Accounts, to cooperate and advise with Dr. E. C. Auchter, Agricultural Research Administrator, on food research problems. One consists of outstanding experts on nutrition, the other of research personnel representing the food processing industry. The Research Administration comprises seven bureaus and several research laboratories dealing with many phases of the production, processing, distribution, and use of agricultural products, as well as with nutrition and food consumption, and in addition has co-

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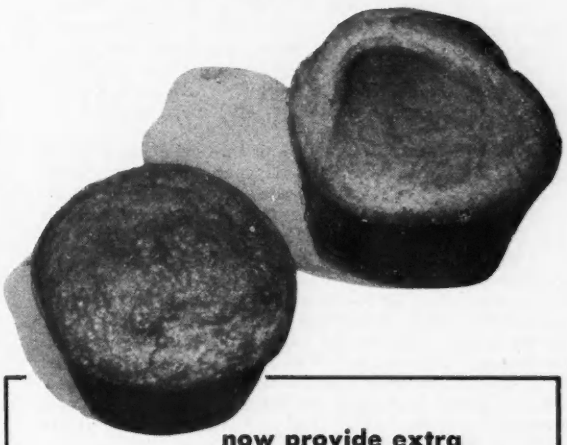

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47.5 mg.	45.6 mg.	Calcium
323 mg.	248 mg.	Phosphorus
331	310	Calories

These figures are based on serving 2 muffins weighing 3-1/3 oz. total.

Downyflake-Fixt Mixes are now made with Enriched Flour. Thus they not only furnish fine quality, low cost baked products, but provide additional vitamins and minerals in delicious, easy-to-make muffins, cakes; etc.

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Waffle • Biscuit • Egg Griddle • Buckwheat Griddle • Bran Muffin Corn Muffin • Ginger Cake • Yellow Cake • White Cake • Spice Cake Coffee Cake • Dehydrated Egg Mix • Pie Crust • Devils Food • Handy Donut

operative arrangements with other research institutions and with experiment stations in every state and in the territories. The following are among those who have accepted membership on the nutrition committee: Professor Vincent DuVigneaud, and Drs. W. C. Rose, Icie Macy-Hoobler, W. H. Sebrell, C. A. Elvehjem, L. A. Maynard, George R. Cowgill, Tom D. Spies, and E. V. McCollum. Members of the committee representing food processors include: Drs. Norman F. Kennedy, H. R. Kraybill, Paul F. Sharp, Russell S. McBride, and C. G. King.

National Research Council Sets Up Committee on Food Composition. According to an announcement dated February 24, at the request of the Quartermaster General, U. S. Army, the National Research Council's Food and Nutrition Board has organized a Committee on Food Composition, with Dr. C. A. Elvehjem as chairman, to collect, coordinate and appraise food composition data. The committee is to act as the repository and point of dissemination for authentic data on all foods being used or considered for use by all branches of the military services. Proximate and mineral composition, as well as analyses for vitamins A, C, thiamin, riboflavin, and niacin, is required as a basis for nutritional evaluation of these foods. Data on new products, processed foods and dehydrated meats, fruits and vegetables especially are needed.

The release states that the committee has already enlisted the cooperation of federal and state laboratories throughout the country. However, it is also aware that a great wealth of food composition data has been accumulated in the course of research and routine analyses by industrial laboratories. The announcement is an appeal to these laboratories of the food industries to make their data active in the war effort. The committee assures that data received for this purpose will be handled with such reservations as should be exercised in the official utilization of this information by the armed services only. Communications should be addressed to Dr. Paul L. Pavcek, Secretary, Committee on Food Composition, National Research Council, 2101 Constitution Avenue, Washington.

Foods in War and Peace was the subject of a meeting on February 19 at the Hotel Commodore, New York, sponsored by the American Section of the Society of Chemical Industry and the American Institute of Chemical Engineers. The program included "Quick Frozen Foods," E. T. Gibson, President of Frosted Foods Sales Corporation; and "Dehydrated Foods," R. S. Hollingshead, Agricultural Chemical Research Division, U. S. Department of Agriculture.

OPA Group Services Branch Meetings. Early in February Dr. J. Paul Leonard, chief, Group Services Branch, Consumer Division, OPA, called a conference of representatives of national and community organizations to discuss the nature of the contemplated system of pricing food and to obtain suggestions regarding the development of a system of "price volunteers" to give support to the new price control program. At the regional meeting in New York February 17, the American Dietetic Association was represented by the editor of this JOURNAL, and that in Chicago by Mrs. Katherine Johnson, Executive Director. Various organizations are cooperating with the Group Services Branch in furthering educational programs on OPA measures, particularly those relating to price control and rationing of food.

Group Services is the title of a bulletin issued by the Group Services Branch. The first issue, confined chiefly to the subject of point rationing, details the story of the mythical Mrs. Jones as she starts out to do the family marketing under the new point system. An open letter addressed to "Mrs. Shopper" suggests various ways of budgeting the family point allowance and urges the substitution of fresh for processed foods. It is also suggested that the reader make the acquaintance of the community service member of the War Price and Rationing Board, information officers of district and regional OPA offices, the staff of the Group Services Branch of the Consumer Division, OPA, and the local Defense Council. Regional OPA officers and addresses are listed as follows: Mr. Frank R. Black, Old Colony Trust Company, 17 Court Street, Boston; Mr. Allen Reagen, Empire State Building, New York City; Mr. Wilson G. Stapleton, 363 Union Commerce Building, Cleveland; Mr. John Bondurant, Candler Building, Peachtree Street, Atlanta; Mr. Tyrell Krum, Fidelity Building, 1000 Main Street, Dallas; Mr. William Sullivan, 226 West Jackson Boulevard, Chicago; Mr. Thomas Donnelly, 503 Kittredge Building, Denver; and Bernice Woodward, 1355 Market Street, San Francisco.

Explaining Rationing. *Consumers' Guide*, February, includes a "Wartime Supplement" summarizing and explaining rulings of government agencies having to do with food and clothing and describing the need for rationing and how to get the new ration book. An illustrated article in this issue shows "how to live without a can opener."

"Good Nutrition Under Point Rationing" is the name of a booklet published by Abraham and Straus, Brooklyn, offered as a guide for marketing and meal planning, prepared by the Brooklyn Civilian Defense Volunteer Office, 131 Livingston Street, Brooklyn, New York.

Seven "tips" for careful buying and use of point-rationed processed foods were offered February 28 by the U. S. Department of Agriculture: (1) For good nutrition, make point-rationed foods fit into planning of balanced meals. (2) Read the label for all it can tell about quantity, quality, ingredients, and use. (3) Choose the size of can most economical for your use. (4) For efficiency, buy the quality for your purpose. (5) At home, put processed foods where they will keep best until needed. Store foods canned in glass in a dry, dark, cool place. Keep dried fruits cool. Keep quick-frozen foods solidly frozen until needed. (6) Cook all foods quickly, to hold vitamin content. (7) Use all good juices—waste none. These tips are followed by a table of weight, capacity and number of servings of average-sized cans as follows: No. 1, tall, 1 lb., 2 cups, 3 to 4 servings; No. 2, 1 lb., 4 oz., 2½ cups, 4 to 5 servings; No. 2½, 1 lb., 12 oz., 3½ cups, 5 to 7 servings. Juice cans: 12½ fl. oz., 1½ cups; 1 pt., 2 fl. oz., 2¼ cups; 1 pt., 4 fl. oz., 2½ cups; 1 pt., 8 fl. oz., 3 cups; 1 qt., 14 fl. oz., 5¾ cups.

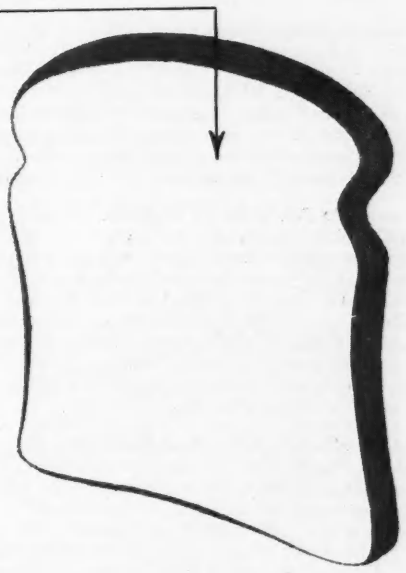
The Food Situation as It Affects Restaurants. *News Letter*, National Restaurant Association, dated February 15 (received February 25) announces that the National Wartime Restaurant Conference will be held in Cleveland for three days, probably during the week of October 19. There will be no exposition in connection with the conference.

The National War Committee of the association took test checks from operators throughout the country to find out their December usage of sugar and coffee per person. The following approximate average figures were found: restaurants doing own baking, 1 lb. sugar for every 21 persons served; restaurants, no baking, 1 lb. sugar for every 60 persons served; all restaurants, 1 lb. coffee for every 70 persons served. The committee presented these figures to the OPA as the absolute minimum, but was advised that further reductions in coffee were necessary on account of the limited supply.

A detailed interpretation by the association of the "procedure and policy of the wage stabilization program," set up by President Roosevelt in October 1942 as part of the program to combat inflation, is included in this issue of the *News Letter*. Information is given concerning exemptions to the ruling which makes wage increases and decreases sub-

MORE AND MORE EACH DAY

IT IS THE STAFF OF LIFE



● Since earliest days, bread has been called "The Staff of Life."

We used to hear that expression and pass it off as a pretty phrase.

But now that war has come between us and so many of our accustomed foods, we see how important bread—Enriched White Bread—really is.

Enriched White Bread is a stronger Staff of Life. Besides the goodness of fine wheat flour, it contains important food minerals and vitamins,* added in scientifically exact quantities to convey to the human system additional sources of nourishment.

There's plenty and to spare of this good enriched white bread and, since it is one of our thriftiest foods, it is hoped you will constantly call it to the attention of all who seek your advice about wartime nutrition.

Enriched White Bread helps to sustain the human energy which will help to win this war.

*Thiamine, niacin, and iron

Department of Nutrition

American Institute of Baking

10 ROCKEFELLER PLAZA · NEW YORK, N. Y.

ACCEPTED AMERICAN MEDICAL ASSN.

Please send me your new literature on "Enriched White Bread."

Name _____

Address _____

City _____ *State* _____

AD 17

ject to the approval of the National War Labor Board, as well as directions for making application to the Board for wage adjustments.

In a hearing before congressional committees in Washington, U. Grant Sain, speaking on behalf of the restaurant industry, said in part: "It has been formerly stated that food consumed away from home constitutes on the whole 10 per cent of the total food consumption. Due to present conditions, it is now estimated that this figure for many products has jumped to 25 per cent. Today the legitimate restaurateur is second in importance only to members of the medical profession in the preservation of the health and well-being of the individuals within the community."

The National War Committee of the association has been meeting in Washington weekly and has been contacting government officials "because of the mounting tension in government rules and regulations." All members of the association and secretaries of state and city restaurant associations are requested to telephone, wire or write inquiries to the Washington secretary. It is stated that regional offices of OPA will receive teletype reports concerning rationing from the heads of government agencies and relay the information to local boards throughout the country.

Hospitals Adjust Wages. According to *Victory* for February 3, the National War Labor Board authorized nonprofit hospitals throughout the country to make wage or salary adjustments for their employees without Board approval. The action was taken because of appeals from hospitals which reported they were losing employees due to comparatively low wage schedules. This is the first blanket exemption of its type made by the Board, the article states.

Changes in School Lunch Program. Secretary of Agriculture Wickard announced February 1 that food supplies for the Community School Lunch Program, previously purchased by AMA (now absorbed by the Food Distribution Administration) and distributed through state welfare agencies, would be purchased by sponsoring organizations from local merchants and farmers, the agencies to be reimbursed by FDA, according to *Victory*, February 3. Some of the present outlets for commodities will be retained, principally in the large metropolitan areas.

Notices of Judgment Against Foods. Recent judgments under the Federal Food, Drug, and Cosmetic Act concern the following products: lemon flavor crystals, purported to be a dehydrated lemon juice, which proved to have an imitation lemon juice base; cherry, grape, milk chocolate, and vanilla flavor syrups, adulterated in that they were artificially colored and flavored or contained ingredients other than those mentioned on the labels; apples from several producers, seized because the fruit contained added poisonous or deleterious substances (arsenic or lead); various canned fruits and vegetables which consisted in whole or in part of a decomposed substance or which were misbranded in that their quality fell below the standards claimed on the labels; "reducing" candies "which would furnish about the same amount of calories as the caramel type of candy of which they consisted"; several vitamin preparations and a wheat germ product bearing such cognomens as "Adiron," "Vitamin Oil," "Vitamin A and D Tablets," and "Vital Vim," and labels representing the articles to be efficacious in the treatment of various ailments and to contain considerable amounts of certain vitamins, alleged to be adulterated and misbranded; five shipments of "Nature's Minerals," alleged to be adulterated in that they contained a poisonous substance (fluorine) and misbranded in that statements and designs on the labels and in accompanying circulars were false. (One such pictured a hotel surrounded by palm trees underneath which appeared the words: "Instead of $200 or $300 a month" followed by an arrow pointing to a home underneath which were the words "You Can Spend Only $3 or 10¢ Per Day." Another claimed to cure practically every known pathological condition from indigestion to diabetes and tumors.)

Legislation on Dry Milk Solids. Sponsored by the American Dry Milk Institute and the National Cooperative Milk Producers Federation, which together represent upwards of 80 per cent of the dry milk industry, a bill to legalize the term "dry milk solids" to replace the less desirable term "dry skim milk" now required by food and drug regulations has been introduced by Congressman Wright Patman under H.R. 149. Congressman Patman states that this product, long handicapped by a name connoting inferiority, is so important to the war effort that 90 per cent of production has been requisitioned by the government to be sent to England, Russia, and our own armed forces. He explained that one reason for the present low output of this product is the odium attached to the work "skim." "Bakers who use dry milk solids in bread," continues Congressman Patman, "have been known to discontinue its use and cancel advertising campaigns when they learned that regulations required that it be called 'skim.' It is a fact that there is enough separated milk left on farms, largely fed to hogs, to make ten times as much dry milk solids as now produced."

Data on Milk. An advertisement prepared for a commercial milk distributor by The Boston Dispensary, has been received from Frances Stern. Daily requirements of adults and children are compared, by means of tables, with food constituents supplied by one quart of milk. The specific contribution which each constituent makes to the body's needs is clearly explained. In submitting this, Miss Stern remarked that it was gratifying to have a commercial firm spend thousands of dollars on educational data and that "it seems a culmination of practice, hopes, and beliefs to have the data for food constituents in the metric system addressed to the lay public."

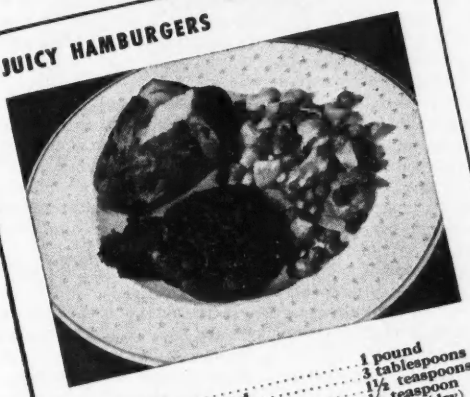
Cold Lunches for War Workers. "Nutrition News Service" of the OWI, Office of Defense Health and Welfare Services, outlines 6 lunch-box menus, as follows, which provide one-third the day's food requirement (National Research Council standards) for a moderately active man: No. 1—1 sliced chicken sandwich, 1 American cheese and lettuce sandwich with mayonnaise, ½ pt. milk, ½ pt. orange juice. No. 2—1 cheese sandwich, 1 chopped dried beef and egg sandwich, ½ pt. milk, ½ pt. grapefruit juice. No. 3—1 hamburger or chopped beef sandwich, 1 sliced tomato and lettuce sandwich with mayonnaise, ½ pt. milk, 8 to 10 dried prunes. No. 4—1 chopped liver or roast beef sandwich, 1 peanut butter sandwich, ½ pt. milk, ½ pt. tomato juice. No. 5—2 ham and egg sandwiches, ½ pt. milk, ½ pt. tomato juice. No. 6—1 sardine and onion sandwich, 1 cheese sandwich, ½ pt. milk, ½ pt. tomato juice, 3 tbsp. roasted peanuts. All sandwiches are made with enriched white or whole grain bread, spread with butter or fortified margarine (4 tsp. to each sandwich). Two feedings per shift would fulfil one-half the day's food requirement for a moderately active man, by adding the following foods to each of the menus: ½ pt. milk, 2 slices bread, 1 egg, 2 tsp. butter, ½ pt. tomato juice.

Eggs. Prepared by Kathryn B. Niles, home economist of the Poultry and Egg National Board, 308 W. Washington Street, Chicago, illustrated leaflets containing a great amount of information on eggs and poultry are ready for distribution. The estimated crop of eggs, chicken and turkey for 1943 is given, and the vitamin content, nutritional and

Ralston Whole Wheat Cereals

MAKE A LITTLE MEAT GO A LONG WAY!

JUICY HAMBURGERS



Hamburger	1 pound
Onion, finely chopped	3 tablespoons
Salt	1½ teaspoons
Pepper	⅛ teaspoon
Instant Ralston	½ cup (dry)
Milk	½ cup

Mix all ingredients together thoroughly. Shape into patties. Cook slowly in hot fat, turning to brown both sides. Recipe makes six 3¼-ounce portions.
For 50-portion recipe, send coupon below

Ralston Whole Wheat Cereal, 40-year-old favorite, cooks in 5 minutes.

In these days of meat rationing, Instant Ralston and Ralston Whole Wheat Cereal serve a valuable purpose as meat-extenders. The recipe given here is one example. Additional meat-stretching recipes are included in the variety offered below.

Among the Types of Food Recommended in the National Nutrition Program

Both these delicious cereals are made from whole wheat with added natural wheat germ. The kind of cereals you can recommend with confidence because they contain the extra thiamin, protein and iron of the wheat germ.

Instant Ralston is the new hot whole wheat cereal that needs no cooking! Just stir it into boiling water or milk . . . and serve. Saves time, fuel; helps protect nutrients that might be lost by long cooking.

FREE To Home Economists . . . Recipes for meat-stretching dishes and other thrifty, wholesome combinations. In quantities to serve 6 or 50. Printed on handy 4 x 6″ cards.

New 20-page book on Whole Grain Products . . . Summary of latest data on whole grain products; discussion of whole grains versus enriched or restored grain products; comparative tables and charts. Excellent for textbook in adult nutrition classes.

USE THIS COUPON

Ralston Research Laboratories,
Ralston Purina Co.
30 Checkerboard Square, St. Louis, Mo.

Please send, no cost or obligation, a set of your special quantity recipes; also the new 20-page illustrated book on grain products.

Name_____

Address_____

City_____ State_____

protective food value of the ever-popular egg. An interesting chart showing the various stages of deterioration of eggs kept in a warm room (80° F.) for 2, 4, and 6 days, compared with the excellent condition of those under refrigeration (45 to 50° F.) for one week, is also available. The illustrations are of candled, boiled, poached and fried eggs. Another leaflet, "Buying Definitions," as the name implies, includes data and purchasing hints on broilers, fryers, roasters, capons and fowl, the proper way of cooking the different species, and various foods which combine well with poultry. A service of the Board to dietitians and nutritionists includes special releases on the latest market facts, menu planning, cookery, and service pertaining to chicken, turkey, goose, duck and eggs, all of which may be obtained in reasonable quantity upon request.

Coffee. The following excerpts are taken from *Pan-American Coffee News* which contains considerable information of interest to a coffee-loving nation: "Scientific tests have challenged the recent contentions of amateur coffee makers that use of old coffee grounds can produce a really palatable cup of coffee. . . . If the consumer uses the proper grind for the coffeemaker, the extraction of soluble materials will average from 80 to 85 per cent. Extraction of the remainder of the soluble materials, such as would be accomplished by brewing old coffee grounds, results only in a colored bitter beverage that should not rightly be called coffee. . . . The use of boiling water, never cold water, in preparation of the brew, was stressed. Water should never be in contact with the coffee grounds for more than five minutes."

A recent bulletin on regulation of retail merchants and restaurant proprietors in the sale of adulterated coffee, issued by the Commissioner of Agriculture and Markets of New York State, was sent to similar officials in other states by Enrico Penteado, Chairman of the Pan-American Coffee Bureau. Illegal use of coffee adulterants is being stamped out in many places and in some the use of substitute beverages has disappeared, according to the bulletin.

Mr. Henry J. Hoffman, chief chemist of the Minnesota Department of Agriculture and Food, advised that Minnesota requires the percentage of coffee and the percentage of cereal to be declared on the label of a blend, and that "in restaurants where menus are used, coffee must be served if the menu calls for coffee. If it is a compound beverage, the menu must so inform the prospective customer. Where no menus are used, signs must be displayed informing the public as to the product being sold as a beverage." Missouri, Ohio, and Oregon are following the same policy.

Structures and Functions of USDA. Following is a brief outline, supplied through the courtesy of T. Swann Harding, Office of Information, of the present structure and functions of the U. S. Department of Agriculture. Fundamental reorganization of the Department took place as a result of the President's executive order dated December 5, 1942, which delegated authority to the Secretary of Agriculture to assume charge of the entire national wartime food program.

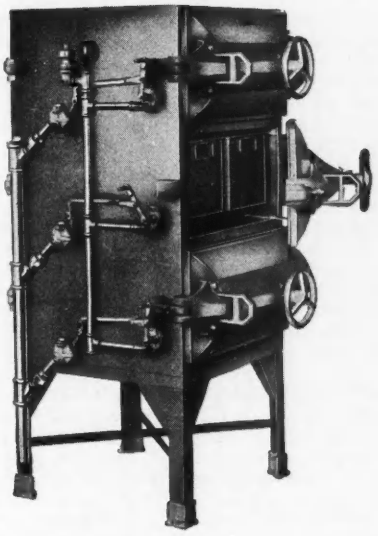
The functional reorganization of the Department, designed to facilitate executive discharge of the Secretary's new responsibilities, involved the setting up of two huge new agencies: the Food Production Administration and the Food Distribution Administration, under which were consolidated several of the existing agencies. The functions of the Agricultural Research Administration, the Commodity Credit Corporation, the Forest Service, and the Rural Electrification Administration remain essentially unaltered. The Food Requirements Committee of WPB was abolished December 19, and subsequently a transfer of personnel from WPB to the Department of Agriculture was made. The Food Production Administration (FPA) functions through the Agricultural Adjustment Agency, Soil Conservation Service, Federal Crop Insurance Corporation, Farm Security Administration, and Farm Credit Administration. The FPA also comprises the Production Programs Branch, Agricultural Labor Branch, Conservation Programs Branch, Price Support and Loan Programs Branch, Production Supplies Programs Branch, and Distribution of Farm Supplies Branch.

In the Food Distribution Administration (FDA) are combined the activities formerly carried on by AMA, the Sugar Agency, portions of the Office of Agricultural War Relations, and of the Bureau of Animal Industry, as well as the Food Division of the War Production Board. In addition to the specific functions formerly performed by these constituent units, the new agency has a general responsibility for recommending to the Secretary programs and policies for the distribution of the wartime food supply and for carrying out such programs when assigned. An important part of the operating work of FDA has been assigned to nine commodity branches. A Requirements and Allocations Control will assemble and analyze information on production, supply, and requirements to formulate the allocation of food among various claimants, such as the armed forces, allies, and the civilian population. Three branches—Civilian Requirements, Civilian Programs, and Food Conservation—will deal with food requirements and programs for the home front. Facilities Branch, Processors Branch, Wholesalers and Retailers Branch and Manpower Branch will work with industry on wartime food problems.

Of the "independent line agencies," the Extension Service continues as a cooperative agency of the Department and the state agricultural colleges, and the Bureau of Agricultural Economics, Office of Foreign Agricultural Relations, and Office of Agricultural War Relations will serve as staff agencies. A Committee on Foreign Purchase and Importation, and a Committee on Domestic Transportation, composed of heads of other agencies within the Department, were established January 22, 1943. On February 9, an Inter-Agency Food Procurement Committee, composed of representatives of the principal government agencies buying food for war purposes, was created by Secretary Wickard, with Roy F. Hendrickson, Director of FDA, as chairman.

On February 16 Secretary Wickard issued a directive giving to the OPA complete responsibility for directing the flow of rationed foods from the time a commodity is "placed in form" for distribution until it reaches the consumer. The OPA will establish the value of coupons used in the point rationing system and will have the responsibility of changing those values as the occasion requires. However, the Department of Agriculture will determine the need for and the time and extent of civilian food rationing, including establishment of differentials in rationing between the various classes of users. The Department will also fix quotas of rationed food for individual processors and will govern the distribution of nonrationed food. A memorandum under the same date provided for the establishment of a Food Ration Policy Committee, consisting of representatives of the Food Distribution and Food Production Administrations of the Department and the Rationing Department of the OPA, which will handle information, differential rations, industry relations and other related matters.

Agricultural engineering research and research on chemical weed eradication and effluent contaminants have been transferred from the Bureau of Agricultural Chemistry and Engineering to the Bureau of Plant Industry, Soils, and Agricultural Engineering. The new Bureau of Agricultural and Industrial Chemistry will have direction of the four Regional Research Laboratories. In regard to the latter, Research Administrator Auchter declared "These laborato-



Steam Cooking is Good Cooking

All the power of government publicity is behind a drive to educate the public to nutrition values. The public is being constantly bombarded with information concerning the extra food values of vegetables, and basic cooking instructions are being publicized in innumerable ways.

This directly points to the extra value of steam cooking. For example, it is being stressed that foods should be brought to cooking temperature rapidly, should not be exposed to air during cooking, and should be cooked in as little water as possible.

Steaming in a Steam-Chef brings food up to temperature in a matter of seconds. There is no period of waiting for the cooking water to come to a boil. The steam, at a temperature of 212° to 228°, is always there for immediate use. Then too, cooking in the sealed compartments of a Steam-Chef is carried on in the complete absence of air, thus preventing oxidation of vitamins. And finally, waterless cooking in a steam cooker naturally reduces the loss of vital elements and vitamins to a minimum.

For better cooking—Steam. For better steaming—Steam-Chef!

Write for Catalog and Steam-Chef Service Guide, with maintenance advice which will prolong the life of your present Steam-Chef.

THE CLEVELAND RANGE COMPANY
3333 Lakeside Ave. Cleveland, Ohio

Cleveland STEAM-CHEF
for better cooking--STEAM

THE PATIENT FINDS IT JUST AS EASY

In less than 1 minute you or the patient can make a reliable qualitative urine-sugar test with

CLINITEST

As Simple As This:

(1) 5 drops urine
(2) 10 drops water
(3) Drop in tablet
(4) Allow for reaction, then compare with color scale

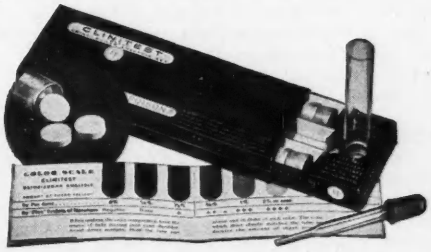
Other Obvious Advantages:

Clinitest Tablets generate own heat; therefore no external heat necessary.

Each tablet contains an accurately measured amount of reagent; therefore no weighing of reagents, no liquids to spill, no delay.

Clinitest is reliable—based on same chemical principles as Benedict's, Fehling's, Haines' tests.

Complete sets available through prescription pharmacies or medical supply houses.



Write for full descriptive literature.

EFFERVESCENT PRODUCTS, INC.
ELKHART, INDIANA

ries, which are already becoming famous for their work on the industrial utilization of farm crops in connection with the war, have a great future ahead of them."

Dr. Louise Stanley Receives Appointment. Dr. Louise Stanley, former chief, Bureau of Home Economics, has been appointed special assistant to Research Administrator E. C. Auchter of the Department of Agriculture.

Bureau of Home Economics. Releases received in February include a folder on cheese which illustrates a variety of ways in which cheese can be used as the main dish of a meal.

Another folder entitled "Serve on the Farm Home Front" stresses the raising of food, avoidance of waste, proper management of time and money, working together, etc., etc. Copies of this and the aforementioned folder are available at $1 per hundred copies on application to the Superintendent of Documents, Washington.

"Mending Men's Suits" is an excellent, well illustrated booklet on the subject, priced at 10 cents.

New OWI Films. Among new films available for non-theatrical purposes are: "The Thousand Days," showing Canada's progress in preparing for war; "Listen to Britain," a record of wartime Britain; "Point Rationing of Food," a movie cartoon; and "Home on the Range," showing production of mutton and wool, beef and leather. A list of distributors from whom films are available may be obtained from the Bureau of Motion Pictures, OWI, Washington.

Dehydrating Industry's Progress. OWI announced February 20 that since the inauguration of the program to expand the dehydration industry in May 1942, when 20 plants were operating with a production capacity of about 15,000,000 lb. annually, 68 additional plants have been put into operation; 22 are almost entirely completed and 19 more have applied for equipment. All of these should be in operation before July 1, 1943 with a total estimated capacity of 200,000,000 lb. yearly. Contracts have already been awarded by the Army and FDA for 140,391,250 lb. dehydrated vegetables and soups, almost ten times annual production of the dehydrating industry at the time the expansion program was inaugurated.

Cancer Control Month. Following the practice of the past several years, President Roosevelt will proclaim the current month as Cancer Control Month throughout the country, and the Women's Field Army of the American Society for the Control of Cancer will conduct its annual appeal for funds and enlistments. Dr. C. C. Little, manager-director of the American Society for the Control of Cancer, writes that today doctors all over the United States report a constantly increasing flow of early cancer cases to their offices for diagnosis and treatment. Since the prospect of cure of cancer is directly related to the observation and treatment of the disease in its early stages, this evidence of practical values of the Women's Field Army work has convinced the medical organizations of counties and states throughout the Union that real progress can be made in the conquest of the disease.

Limiting the Sale of Vitamins. According to the *Journal* of the American Medical Association for February 13, the New Jersey Board of Pharmacy announced on January 28 that vitamin preparations that are sold exclusively as foods or food accessories and the labels of which bear no direction for use in the prevention, mitigation or cure of disease, must be labeled "not for medical use" when sold in New Jersey. An announcement in the New York *Times* states that otherwise the board will consider the vitamin products as coming within the classification of drugs and medicines within the meaning of the pharmacy act. The item continued that a properly balanced diet is the best source of necessary vitamins, and it is up to the physician to decide if and when vitamins are needed for the treatment or prevention of disease; in such cases the concentrated vitamins in the usual capsule form in proper dosage may be prescribed, which would of course classify them as drugs.

University of Minnesota Center for Continuation Study. A Continuation Course in Dietetics was presented February 18–20. Among the subjects discussed were: food sanitation, milk sanitation, special dietary requirements of patients on medical service and pediatric and surgical service, diets for the aged, mineral requirements of normal diet, nutrition and physical efficiency, special dietary requirements of pregnancy and lactation, government control of food supplies, dietary substitutions based on supply and demand, vitamins and prevention and treatment of colds, clinical deficiency diseases, dehydration of fruits and vegetables, and the production and institutional uses of dry milk solids. A forum on nutrition education included such subjects as Victory Gardens, cereal proteins, and education of hospital patients and college and high school students. Among the lecturers presenting the course were Alice Biester, associate professor of nutrition; Donald W. Cowan, M.D., assistant professor of preventive medicine and public health; Arild E. Hansen, M.D., professor of pediatrics; Ancel Keys, professor of physiology; Gertrude I. Thomas, assistant professor of nutrition; and Roland S. Vaile, professor of economics and marketing; all of the University of Minnesota. Other speakers included Lela E. Booher, chief nutritionist, General Mills, Inc.; Sister James Agnes, Department of Home Economics, College of St. Catherine, St. Paul; Betty Sullivan, chief chemist, Russell Miller Milling Company, Minneapolis; and E. L. Tuohy, M.D., General Extension Division, University of Minnesota, Duluth.

Manteno State Hospital. *The Welfare Bulletin*, Illinois State Department of Public Welfare, January 1943, contains an account of the physical layout and administration of the state hospital at Manteno, where mental patients with infectious diseases are cared for. The strictly modern typhoid carrier hospital for mental patients which has just been completed, is the only hospital of its kind in the world. The article describes how patient help, carefully supervised, is utilized to supplement regular employees, and tells what precautions are taken in the handling of food.

What's New in Foods and Nutrition. This is the title of a new periodical, sans advertising, addressed to the homemaker, the format of which is patterned more or less after that of the *Readers Digest*, which means that it is compact and can be conveniently filed for future use. Among the helpful features of the periodical is a list of suggestions for three meals a day for every day in the month with excellent recipes on the page facing each day's menus. An index to the recipes is included. Naturally the whole publication is keyed to the present situation and should be of material aid to the harried housewife. Priced on the newsstands at 25 cents a copy, a year's subscription is $3.00, on application to the publisher, Harvey and Howe, Inc., 919 North Michigan Avenue, Chicago.

Dietitian to Have Charge of Navy Home. According to the February 17 New York *Herald Tribune*, "Sunken Orchard," the 215-acre estate of the late C. E. F. McCann at Oyster Bay, L.I., recently loaned by his heirs as a rest and rehabilitation home for men of the U. S. Navy, will be under the supervision of Mrs. William Rochester, "a registered dietitian and graduate of Johns Hopkins University."

The Newer Concepts of Meat in Nutrition

Meat

and Protein Needs under Total War Effort

The ever-growing list of broken production records, and the widespread participation of the civilian population in war activities, give accurate evidence of the increased physical effort demanded of workers and civilians alike. In the final analysis, the ability to cope with the added strain of all-out war is directly dependent upon the nutritional state.

While increased energy expenditure requires an added intake of carbohydrate and fat, the sum total of the metabolic processes must be maintained at normalcy to make possible this greater physical effort. Protein requirements, while not raised by augmented muscular activity, must nevertheless be fully satisfied for optimum physical efficiency.

To this end, meat is advantageously utilized by the organism. Its complete protein supplies all the essential amino acids, and enhances the biologic value of the incomplete proteins derived from other sources. Furthermore, meat provides generously of the B complex vitamins which are needed in greater amounts during periods of increased physical exertion; it also supplies the essential minerals iron, copper, and phosphorus. Meat is a valuable and nutritionally economical component of the diet, whether served hot on the table or cold in the lunch box.

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED AMERICAN MEDICAL ASSN.

American Meat Institute

CHICAGO

The home will be staffed by paid personnel and National Women's Council of the Navy League volunteers.

A Dietitian's Views on the Food Situation as It Affects the Low-Income Group. Wilma Weidlein, Sage Memorial Hospital, Ganado, Arizona, in a recent letter to the JOURNAL, comments on the system in England, as reported by E. M. H. Lloyd in the July issue of this JOURNAL, which subsidizes certain commodities so that everyone gets his share according to his needs and irrespective of his ability to pay. For instance, mothers and children receive priority with regard to milk, oranges and orange juice. Miss Weidlein feels that we should initiate surveys of those groups who may require assistance to maintain adequate nutrition—specifically, those in hospitals and other institutions "whose nutrition will be pushed even below the minimum level by curtailed income and the rise in food prices."

District of Columbia Dietetic Association. At the January meeting Mary I. Barber, Food Consultant to the Secretary of War, and Ina Lindman, Food Consultant to the Navy, outlined the history of the Army and Navy rations, respectively. At the February meeting Calla Van Syckle, Consumer Division, OPA, discussed point rationing and the need to devise substitutes for meat, cheese, and eggs, when such products are rationed.

Mrs. Berneice Shipman has been appointed to represent the association on the Nutrition Committee of the District.

New Jersey Dietetic Association. Recent appointments include: Margaret Vye Mauer, graduate of the New Jersey Cooperative Training Course, to Hackensack Hospital; Bernice Goldstein, Beth Israel Hospital, Newark, to Veterans Hospital, Dayton, Ohio, as chief dietitian; Katherine Stillings and Irene Antanow, graduates of the New Jersey Cooperative Training Course, as Army dietitians; Elaine Loeski, to Paterson General Hospital, as assistant dietitian; Marie Plante, formerly dietitian, Greystone Hospital, and Virginia Takes and Mrs. Carr, to Orange Memorial Hospital; Asta Low Packard, to Calco Chemical Company, Bound Brook, as manager of the Employees' Restaurant.

Greater New York Dietetic Association. The annual Mary Swartz Rose Memorial Lecture was given February 17 at the New York Academy of Medicine by Dr. Charles G. King, Scientific Director, Nutrition Foundation Incorporated, under the title "The Nutrition Foundation—Universities and the Food Industries Looking Ahead Together."

Oklahoma Dietetic Association. This small but very active and efficient organization is continuing quarterly publication of *The Dietitian*, the official bulletin of the association. The first issue for 1943 is admirable, containing as it does an excellent editorial summary of pertinent topics, a short message from the president, a report from the state delegate to the national convention, a bird's-eye view of what other state associations are doing, and an unusually well-prepared digest of what's new in nutrition, contributed by Vera I. Parman.

Recent appointments include the following: Ann Hains, St. Anthony's Hospital, and Ella Mae Fikes, graduate student, St. Anthony's Hospital, to Harris Memorial Methodist Hospital, Fort Worth, Texas, as chief dietitian and assistant, respectively; Mrs. Virginia Beedle, Y.W.C.A. Cafeteria, Oklahoma City, to Oklahoma City Air Depot, with Mildred Smith and Mrs. Natalie Northcutt Rockett, as assistants; Betty McVey, College Cafeteria, Stillwater, to Luke Field, Phoenix, Arizona.

The 1942 student graduates of the training course at Oklahoma A. & M. College have accepted positions as follows: Esther Klein and Ella Mae Smith, College Food Units; Irene Chapman, Northeastern State Teachers College, Tahlequah; Alice Stevens, Indiana State Teachers College, Terre Haute; and Lorene Perteit, University of Indiana. Other staff dietitians of Oklahoma A. & M. College Food Units are: Marguerite Ross, Cordell Dining Hall; Ellen Penn, Household Science Department and College Cafeteria; Ethel Barnes, Murray Dining Hall; and Clara Cruzan, Willard Dining Hall.

Dorothy Falkenberg, formerly at the College Cafeteria, Stillwater, is now Mrs. R. J. Cellar, residing at 2047 Wynton Road, Columbus, Georgia.

Northeastern Pennsylvania Dietetic Association. In conjunction with the Luzerne County Nutrition Council, the association sponsored a county-wide "Nutrition Week" the purpose of which was to emphasize the importance of proper nutrition on the home front. Essay and poster contests were held in the city and county schools, exhibits were displayed in department stores and at the Kirby Health Center, and motion pictures were shown several times during the week. Arrangements were also made for daily news articles in local papers and talks on the radio. The success of the project encouraged the Scranton group to plan a similar program for March, with Sophia Podgorski representing the dietitians' association.

At the December meeting Mr. B. C. Goodheart, Hoffmann-La Roche Company, Nutley, New Jersey, spoke on "Vitamins."

Thelma Sumner, Wyoming Valley Homeopathic Hospital, addressed the West Pittston Junior Women's Club on "Recent Trends in Nutrition."

Miss Podgorski, Nesbitt Memorial Hospital, Kingston, addressed the Red Cross Canteen Corps, Bloomsburg, on "The Activities of the Canteen Corps."

Kathleen Dougherty, director of the G.A.R. Memorial High School Cafeteria, has been appointed chairman of a committee representing the association in the campaign for enlistment in the Waacs.

Between fifty and sixty members of the Wyoming Valley Red Cross Canteen Corps have completed 50 hours of volunteer service in the hospitals of Wilkes-Barre. Canteen classes are working in the following hospitals in Scranton: St. Mary's Mater Misericordia, under the direction of Mary Dougherty; Mercy Hospital, under Dorothy O'Brien; and State Hospital, under Mary O'Hara. Marie McLaughlin is teaching canteen classes in Olyphant. Miss O'Brien is chairman of the institutions committee working for the collection of fats.

Philadelphia Dietetic Association. Margaret Rosoff, dietitian at Northeastern Hospital, teaches canteen courses at the Kensington Y.W.C.A. and a course in nutrition at the Mastbaum Vocational School, and has been appointed a member of the Health Education Committee, Kensington Y.W.C.A.

Evelyn Bagentose Barclay, Germantown Hospital, teaches a cookery class at Germantown Boys' Club. A feature article, describing Mrs. Barclay's work, appeared in the Philadelphia *Inquirer*, February 21.

Mrs. Elsie Venner, Home Management consultant, Family Society, is a new member of the association.

Grace Godfrey, dean, Home Economics Department, Drexel Institute of Technology, and Miriam Williams, associate editor, *Farm Journal and Farmer's Wife Magazine* addressed the A.A.U.W. in a series of lectures on "Food Substitutes and Point Rationing."

The Philadelphia Nutrition Council, with Helen Goodspeed as chairman and Miss Williams, chairman of the Share the Meat Campaign, organized the nutrition advisers for

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the forty-five zones. Many members of the association have volunteered as nutrition advisers, and have led group meetings on sharing meat, normal diet, point rationing, food alternates and other subjects pertinent to wartime nutrition.

Helen Hennenberg, nutritionist with the Philadelphia Nutrition Council, helped direct a War Time Food Forum at Strawbridge and Clothier Department Store early in February. Marjorie Sims and Agnes Brown, faculty members of Drexel Institute of Technology, were among the speakers.

The following appointments have been anounced: Katherine Williams, Jewish Hospital, to West Town School; Miriam Gaige, director of Dietary Department, Presbyterian Hospital, to Jewish Hospital; Margaret Neubert, to Friends Hospital; Sarah C. Campbell and Zetta Thomas, to Presbyterian Hospital; Judith Judd, therapeutic dietitian, Presbyterian Hospital, to University of Maryland Hospital; Mildred Spain, to Temple University Hospital; Elizabeth Hilf, Frankford Hospital, to Temple University Hospital; Annabell Voigt, student dietitian, Philadelphia General Hospital, to Post-Graduate Hospital, New York; Willena Schoene, student dietitian, Philadelphia General Hospital, to Mount Sinai Hospital, New York; Dorothy Halladay, Graduate Hospital, to Mount Sinai Hospital; Esther Sippel, student dietitian, St. Mary's Hospital, Rochester, Minnesota, to Philadelphia General Hospital; Frances Selzer, Philadelphia General Hospital, now in Army service and stationed at Atlantic City.

Student dietitian appointments include: Margaret MaKibbon, MacMurray College, to Philadelphia General Hospital; Thelma Kurlander, Western Reserve University, Barbara Clifton, Purdue University, and Lorraine Johnson, Iowa State College, to Mount Sinai Hospital.

Pittsburgh Dietetic Association. At the January meeting, Allegheny General Hospital, Mrs. Jean Cutler, home consultant, Federal Housing Commission, Pittsburgh, discussed local housing projects in relation to the Federal Housing Commission.

At the February meeting, Children's Hospital, Dr. Herbert E. Longnecker, associate director of research, Department of Chemistry, University of Pittsburgh, spoke on "Wartime Diets."

Red Cross canteen workers are being trained in several of the Pittsburgh hospitals. After completion of the course, they expect to assist on a volunteer basis when needed.

Irene L. Willson, Shadyside Hospital, addressed the P.T.A., Union High Schools, Turtle Creek, January 28, on "Common Sense Nutrition."

Frances Baker, Allegheny General Hospital, was elected secretary of the local association to fill the unexpired term of office of Alice Knox who has entered Army service. Clarice McCullough, Magee Hospital, has been appointed chairman, Therapeutic Section, Pittsburgh Dietetic Association, and Frances Swenson, also of Magee Hospital, chairman, Administrative Section, Pennsylvania Dietetic Association.

Mary Aimone, formerly of Children's Hospital, has announced her marriage to Sergt. Thomas Saluri, Camp Maxey, Texas.

Ruth Kennedy McCullough has resigned from the staff of the Pittsburgh Dairy Council to join her husband who is stationed with the armed forces at Grand Rapids, Michigan.

Rena S. Eckman is now associated with E. M. Geraghty at Union Memorial Hospital, Baltimore.

St. Louis Dietetic Association. The association honored Frances MacKinnon, President, American Dietetic Association, at a tea January 3 in the Nurses' Building, Jewish Hospital. Guests included physicians and hospital administrators of St. Louis and members of the association. Receiving the guests were Mrs. Theodora Stebbins, president, Missouri Dietetic Association, and officers of the local organization including Dorothy Dolan, president, Betty McCorkle, vice-president, Henrietta Becker, treasurer, and Frances Anderson, secretary. Ruth Kahn was in charge of arrangements. On the following day Miss MacKinnon addressed the local association on the subject, "The Dietitian's Place in the War Program."

Virginia Dietetic Association. An executive meeting, at which Kathryn Heitshu, president, presided, was held at the John Marshall Hotel January 23. Helen R. Robertson, as delegate, presented a report of the meeting of the House of Delegates at the annual convention and section chairmen submitted various topics for discussion during the current year. It was decided to hold the spring meeting March 25–27 concurrently with that of the Medical College of Virginia at which a symposium on "Nutrition in War" was to be presented.

Graduates of home economics and institution management at Madison College, Harrisonburg, who are engaged in Army or government services, include the following: Esther Sampson, Rationing Board, Washington; Jean Collier Cleland, Fort Munroe, Virginia; Nancy Evans and Faye Mitchell, Army Medical Center, Walter Reed Hospital; Elaine Johnston, assistant to Food Administrator, Washington; Olga Heard, Station Hospital, Fort Eustis, Virginia; Miriam C. Hudson and Bessie Johnson, Government Cafeterias, Washington; Roberta Jones, Station Hospital, Fort McPherson, Georgia; Marguerite Muse, Washington Airport, Washington; Sybil Rosenbloom, Fort Knox, Kentucky; and Shirley Silverberg, Waacs.

Elizabeth Burriss, president-elect, state association, on leave from the Medical College of Virginia, is engaged in graduate study at the University of Chicago.

Wisconsin Dietetic Association. At the January meeting of the Milwaukee association Mrs. Ethel Keating discussed disaster feeding, Mrs. Grace Ullman reported on activities at the Army induction center, and Mrs. Breta Griem on the Red Cross nutrition classes. At the February meeting, Miss Stafford, who spent a number of years as missionary in China, was the speaker.

The association's annual refresher course, conducted by Susan West at Milwaukee-Downer College, consisted of a workshop for teachers of Red Cross classes. Teaching devices and techniques were discussed and Miss West talked on the latest nutritional advances.

A nutrition center under the auspices of the Milwaukee County Council of Defense Nutrition Committee has been opened in the downtown section of the city. This will be manned by dietitians and nutritionists who have volunteered their services as consultants on nutrition problems. Among the 150 guests who attended the opening were Helen Walsh, Office of Defense Health and Welfare, Chicago, and Adeline Wood, representing the American Dietetic Association.

Milwaukee students of the Red Cross canteen course were able recently to apply their training in disaster feeding when fire destroyed part of the St. Charles Home for Boys. A group of 80 were very successfully fed from a mobile unit for a two-day period. Six canteen courses have been given in Milwaukee with enrollments ranging from 25 to 165. The theoretical work is conducted at the Milwaukee Children's Hospital and Milwaukee County Hospital, and the practical training at the Army induction center and through school lunch programs. Since February 1942 the Red Cross nutrition program has covered 100 courses with enrollments of 25 to 300.

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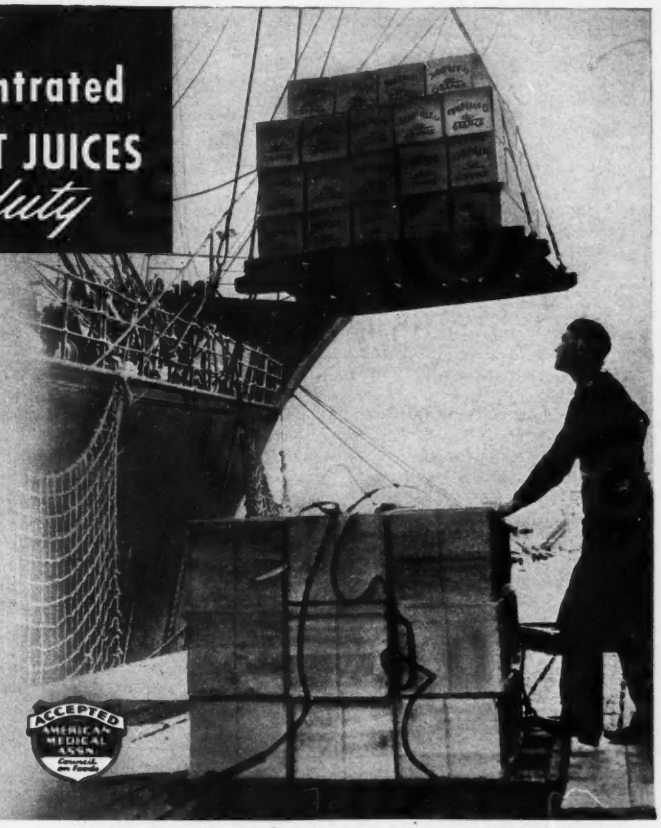

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The Madison Dietetic Association met at Baron's Tea Room February 22. Winifred Perry, a graduate student from England, now studying at the University of Wisconsin, gave a brief talk on the rationing problems in England and methods used in overcoming difficulties of such.

Dietitians recently appointed to Army service include: Agnes Walish, Camp Ord, California; Anita Schaefer, Fort Leavenworth, Kansas; and Isla Jepson, Martha Linder and Esther Sneberk, Traux Field.

Mrs. Jeanette Roup and Mrs. Dorothy Hathaway have been accepted as volunteer consultants on nutrition in the Milwaukee Council of Social Agencies.

Alice Klingler, Michael Reese Hospital, Chicago, has been appointed to the Milwaukee County Home for Dependent Children; and Dorothy Roberts, Deaconess Hospital, has been appointed to St. Luke's Hospital, Chicago.

News From Our Advertisers and Exhibitors. Prepared under the supervision of Meredith Moulton Redhead, home economist for *H. J. Heinz Company*, Pittsburgh, a new booklet entitled "Heinz Special Dietary Foods in Soft Diets and Other Special Uses," may be obtained upon application. For use in the hospital kitchen and also as an aid to patients leaving the hospital, the book contains a generous assortment of recipes for beverages, soups, meat, egg and vegetable dishes, appetizers, salads and dressings, and desserts. The letter "S" opposite a recipe denotes a "soft" diet, "L" for light, "LR" for low-residue, and "B" for bland. Also included are descriptions, uses, and nutritive value of Heinz strained and junior foods. Attractively illustrated and completely indexed, the book should prove of considerable assistance to those for whom it was prepared.

Attention is called to current issues of "Cellu Topics" published by the *Chicago Dietetic Supply House*, which carries timely articles on meatless meals and the use of soy beans as a meat substitute, including recipes.

An attractive, illustrated pamphlet on the importance and use of whole grain products in furthering the National Nutrition Program has been prepared by the *Ralston Research Laboratories*, St. Louis. As. Mr. H. J. Smith, director of the laboratories, states in the Foreword, there is still a tremendous educational job to be done among many millions of Americans and this job rests largely with dietitians and other nutrition authorities. An interesting and well presented story is told of the history of wheat, composition, protective nutrients, the benefits of added wheat germ, and the proportions of protein, fat, carbohydrates, iron, copper, calcium, manganese, phosphorus, thiamin, riboflavin, and niacin in a 30-gram serving of Ralston Whole Wheat Cereal. A two-page chart covering the sources and properties of, and requirements for these nutritional essentials will be found extremely helpful in the preparation of material for community teaching. A copy of the national nutrition chart is also included and a collection of appetizing recipes in which various Ralston products are used. Also available on application are six-page folders to be distributed to homemakers in adult nutrition classes, recipes to serve six or fifty people, allergy and low-calorie diets.

"Nutrition News" for February, published by the *National Dairy Council*, Chicago, contains an article on food research by Dr. L. A. Maynard of Cornell University, and excerpts on dehydrated foods, thiamin and ascorbic acid syntheses, and mineral metabolism of college women. An information column advises that pine needles are one of the sources of vitamin C found worth gathering in Russia; that the first bartered food in America was milk traded by the Norsemen to the American natives for furs; that Mexico is now supplying the vanilla formerly imported from Madagascar; and that a ship's ton of canned boiled potatoes weighs 920 pounds, while the same ship's ton of dehydrated potatoes when reconstituted weighs 3980 pounds. Folders on the composition, manufacture and food value of ice cream, and on the "morale" value of this product in times of stress, are also available.

Publications offered by *General Mills*, Minneapolis, include a booklet entitled "War Work, The Second Year," which contains data on conservation and salvage, covering clothing, food, fuel, and household equipment; chapters on buying wisely in wartime, planning nutritious meals, and other food problems; and comments on healthful exercise, Victory Gardens, reading material for service men, and problems of civilian defense. A leaflet entitled "Wartime Services for the Home Front" offers information in regard to War Ration Book No. 2 and how to use the food stamps. Further bulletins on rationing will be issued from time to time.

The *Cup and Container Institute*, 1790 Broadway, New York, has prepared a pamphlet on "Eating Out" during wartime, according to which the volume of meals served ouside the home in 1942 increased 20% over that of 1941. This increased activity in food handling and the corresponding shortage of dishwashing manpower and materials have created a problem in public health. "Sanitary inspectors," it is stated, "are ordinarily on guard against sanitary violations, but due to a shortage of inspectors, and the increase in eating and drinking places, the problem has become acute." The dangers resulting from crowded areas and improperly washed dishes and glassware are noted, and the solution of the problem, to a large extent, suggested through the use of paper plates, bowls and cups. In mass feeding of factory workers meals served on paper can be delivered sealed, minimizing the risk en route. The cost of collection and washing is eliminated, proper sanitation is assured, and a considerable amount of metal which would otherwise go into trays, utensils, and kitchen equipment, is saved outright.

Attention is again called to the Nutrition Yardstick, developed by the *National Live Stock and Meat Board*, Chicago, as a contribution to the National Nutrition Program. This is a graphic calculator or slide-rule device for measuring the food value and adequacy of the diet, designed to enable dietitians and others concerned with nutrition to calculate the food value of a diet rapidly and accurately. It is also simple enough for housewives to use in checking the family's meals. Food value requirements are given for a man, woman, preschool child, school child, and adolescent girl and boy. In addition to the above, the yardstick may be used to identify good sources of various food constituents, to check the adequacy of the school or cafeteria lunch, to plan a diet low in calories and also one to increase weight, and finally and most important, to prove that it is possible to get an adequate supply of minerals and vitamins from food in a normal diet. Attached to the yardstick is a 24-page book which lists 541 foods and food combinations together with the amounts of the various food essentials which each supplies. Degree of adequacy of the diet is represented by three zones—danger, subsistence, and adequate, detailing the minimum, adequate, and recommended ranges. Despite the extensive amount of information it contains, the yardstick is no larger than an average size blotter and folds to fit into a #10 envelope.

Wesson Oil & Snowdrift Sales Co is sponsoring a contest, announced in the advertising section of this JOURNAL, for the best suggestions for conserving shortening. According to the statement of the advertiser, this contest is offered in a sincere effort to assist in the war effort and it should result in many worthwhile suggestions.